

621.317

CATALOGUE 19 A



# TRACTOR

## Lighting Outfits

ELECTRIC LIGHTS WITHOUT A  
STORAGE BATTERY





## WE PREPAY THE EXPRESS CHARGES

**E**AST of the Mississippi River or to the Mississippi on points beyond when cash accompanies the order. Orders not accompanied by cash will be sent C. O. D. We do not pay Express on C. O. D. shipments.

Goods that can be sent by parcel post will be prepaid anywhere if cash accompanies the order. There is no cash discount on K-W Ignition Apparatus and postage will be added if full amount of cash does not accompany the order.

Net prices are quoted in this Catalogue and you can place your order with us direct or through your dealer.

## GUARANTEE

All K-W Lighting Generators are guaranteed against any defect in workmanship or material for one year from date of purchase. This guarantee does not cover wear of contact points on Spark Coils or High Tension Magnetos, nor Lamps or Bulbs.

## SUGGESTIONS FOR MOUNTING K-W LOW TENSION MAGNETO-GENERATORS

K-W Low Tension Magnetos can be run in either direction and in any position, and will give perfect results just so they get the proper speed, which is about four times as fast as the engine.

The hinged base of any of our friction drive Magnetos can be taken off and put on other side of Magneto, so as to make the friction wheel come on the opposite side whenever desired. It is best to specify the way the Generator will be mounted and we will turn the oil-cups to suit.

Special pulleys and gears or sprockets with hubs are not made by us. These can be made in any machine shop.

## THE SPEED

The speed is from 2000 to 3000 R.P.M., or about four or five times engine speed on average tractors. For slow running engines, speed the Generator slightly faster, or for fast engines, do not speed it quite as fast.



CLEVELAND, OHIO

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WEATHER conditions often make it desirable or even imperative for the Tractor User to work after dark or before daylight; in which case, an absolutely reliable and efficient lighting system is necessary.

The K-W Lighting Outfit meets this requirement, and is depended upon by hundreds of farmers the country over.

In presenting this catalog to the Tractor Owner and Tractor Dealer, we wish to place particular emphasis upon the extreme simplicity of the K-W Magneto Generator.

The K-W Magneto Generator has been in constant successful daily use since 1907, when it was first used for a lighting outfit on Automobiles and Motor-boats, and has always been recognized as the most economical system, both in first cost and upkeep, of any outfit on the market.

There are three very essential requirements of a successful lighting outfit for tractor use; SIMPLICITY, RELIABILITY and ECONOMY, and all these are combined in the K-W Lighting System, to a degree not found in any other.

All K-W Generators are driven either by belt or friction, which makes them simple and easy to install, while a drop or two of oil in the bearings every few days, is the only attention they require.

Special attention is called to Page 2, which explains the internal construction of the K-W Magneto Generator and the two illustrations show clearly its extremely simple design.

Pages 3 and 4 illustrate fully the different Models these Generators are made in, the sole purpose of which is for convenience in mounting on the engine, as all 4-magnet Generators have the same electrical output and all 3-magnet Generators the same.

Friction Drive is always recommended over Belt Drive wherever possible, as belts sometimes stretch and break. The Friction Drive also has the advantage that it can be released in the daytime, when light is not required, thus saving the extra wear on the bearings and prolonging its life indefinitely.

K-W Generators can also be used with K-W Vibrating Spark Coils for ignition on stationary engines, in place of dry cells. They should be mounted the same as on Tractor engines, so as to have a speed of from 2000 or 3000 R. P. M. One light can also be used in connection with the ignition if desired.

These Generators WILL NOT IGNITE ON A MAKE AND BREAK ENGINE, unless it is changed to a Jump Spark System, using Spark Plugs and a Low Tension Timer or Commutator.

We have tried to make this catalog as complete as possible, but will be pleased to give personal attention to any inquiry received and answer fully all questions.

10 90-B6901 TCF



## INTERNAL CONSTRUCTION OF K-W LOW TENSION MAGNETO-GENERATOR

ALL K-W Magneto-Generators have the same internal working parts, the difference in the various models being merely for convenience in installing. Some are belt, and some are friction drive; some upright, some inverted, and others horizontal, but the working parts are all alike and the speed the same—four or five times crank shaft speed, which is about 2,000 or 3,000 R.P.M. They run equally well in either direction and in any position.

This illustration shows the internal construction and extreme simplicity of the K-W Generator, designed on an entirely original principle and patented by us. Instead of having wires wound longitudinally around a revolving armature, it has a stationary spiral winding of copper ribbon, as is shown in center of Fig. 2, and also in Fig. 1, which is a view inside of a Low Tension Magneto. The rotor changes the direction of magnetic flux through the winding, four times per revolution, and thus produces the electric current. This rotor revolves in two sets of the latest improved annular ball bearings, and does not rub against or touch any other part of the entire Generator, as all other parts stand still.

Terminals of the winding extend through the top of the pole pieces in which the rotor revolves, and are securely connected to the binding posts, which are located at the end of the Generator.

### K-W MAGNETOS DO NOT CHARGE A STORAGE BATTERY

as they generate alternating current, but no Storage Battery is needed, and this unnecessary weight and trouble is eliminated.

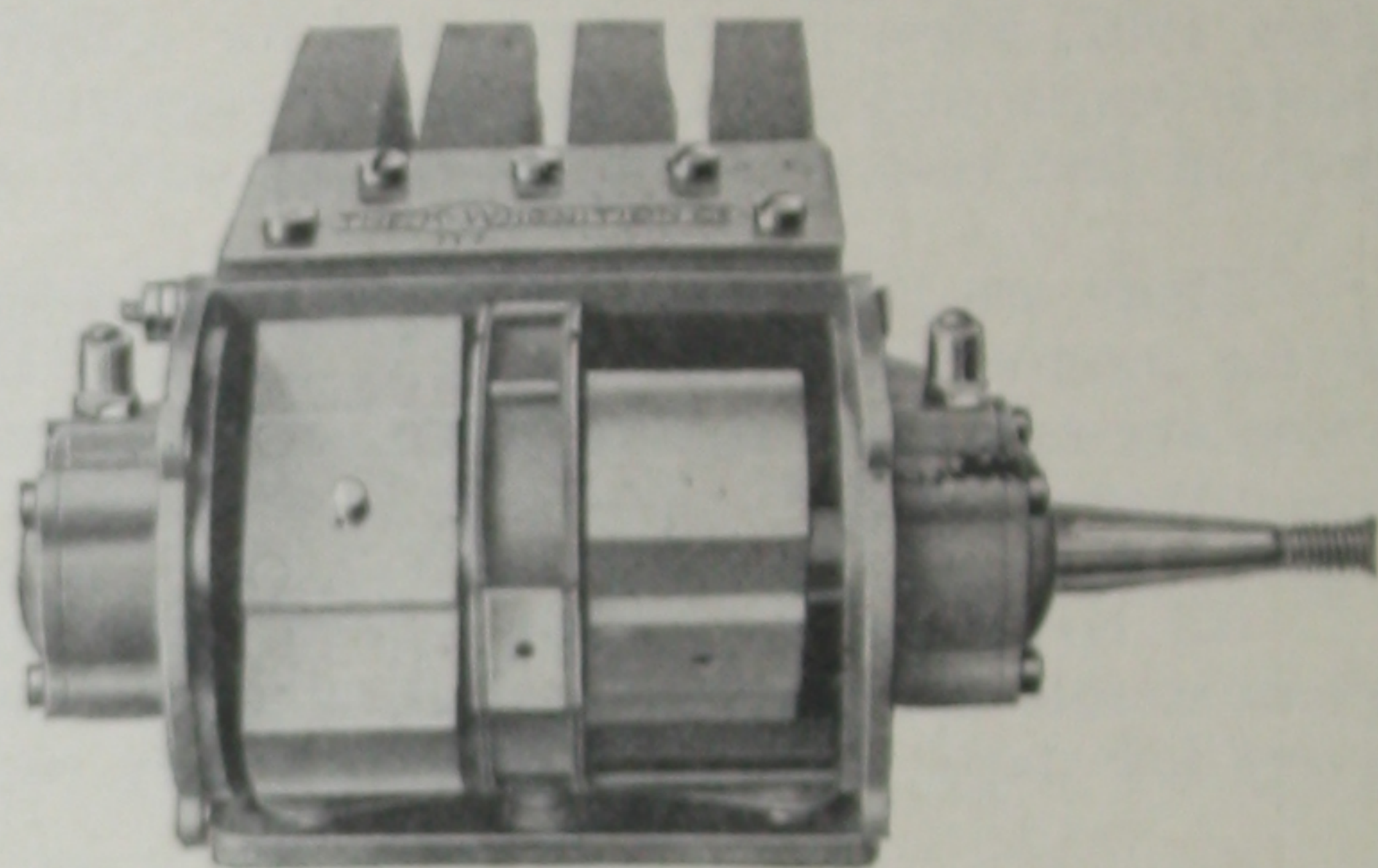


Figure 1

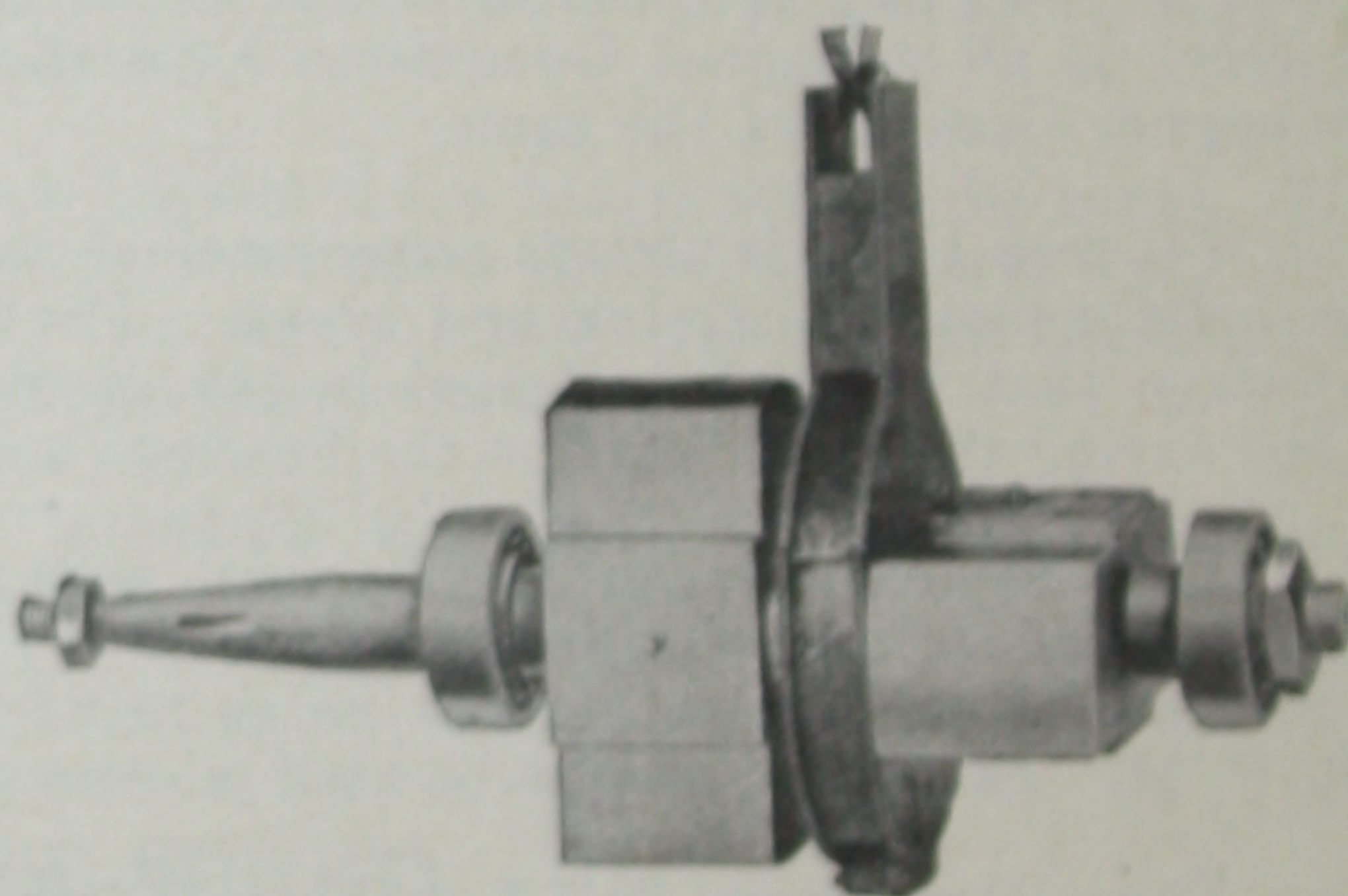


Figure 2

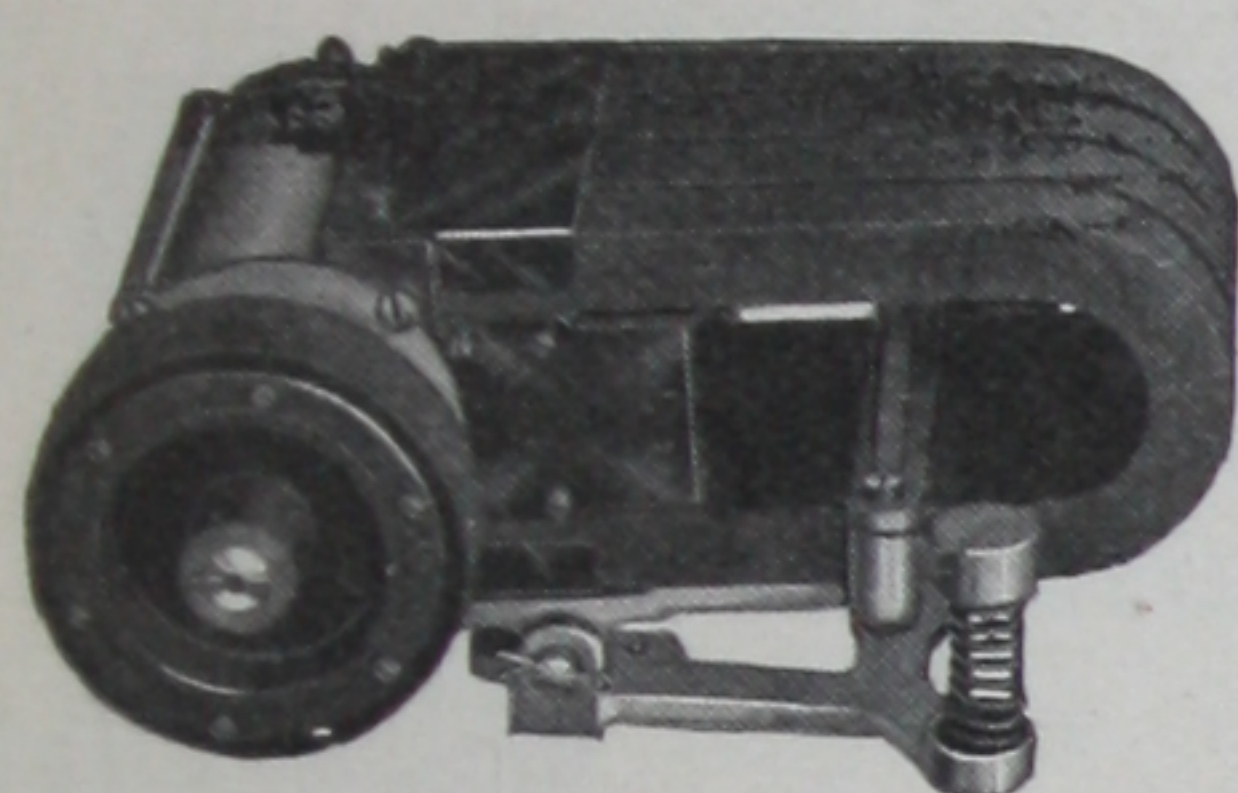
Note the Wonderful Simplicity of the K-W Construction.

THE ELECTRICAL PART is completely housed, making the Generator practically waterproof. It will stand any amount of spray or rain. Oil it occasionally, and the K-W Generator will "Stay On the Job."



## FRICTION DRIVE K-W LOW TENSION MAGNETOS OR ALTERNATING CURRENT GENERATORS

### DIMENSIONS



**MODEL LS**  
Three Magnet \$27.50  
Code—"Sally"

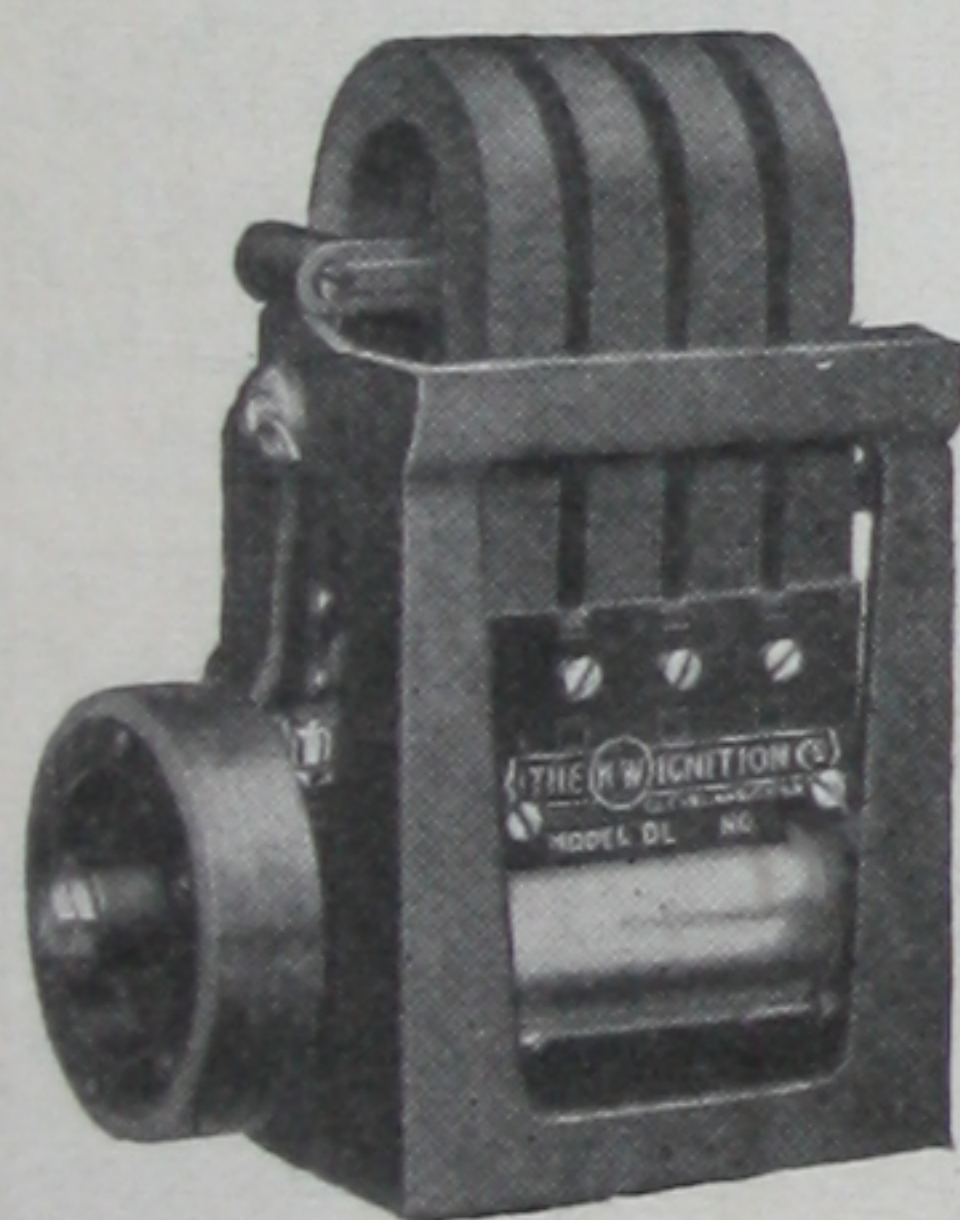
**MODEL UL**  
Four Magnet—\$35.00  
Code—"Usually"

	Model LS	Model UL
Vertical Thickness, including base...	4 $\frac{3}{4}$ in.	4 $\frac{3}{4}$ in.
Horizontal Length.....	9 $\frac{1}{2}$ in.	10 $\frac{3}{4}$ in.
Width, including shaft and friction wheel.....	7 $\frac{1}{2}$ in.	8 $\frac{3}{4}$ in.
Weight.....	18 lbs.	23 lbs.

This model is provided with a special hinged bracket. It is the Model regularly supplied with Lighting Outfit. If necessary to mount in any other position than shown in cut, specify and we will change spring base and oil cups accordingly, or if desired, send Model DL, AL or EL.

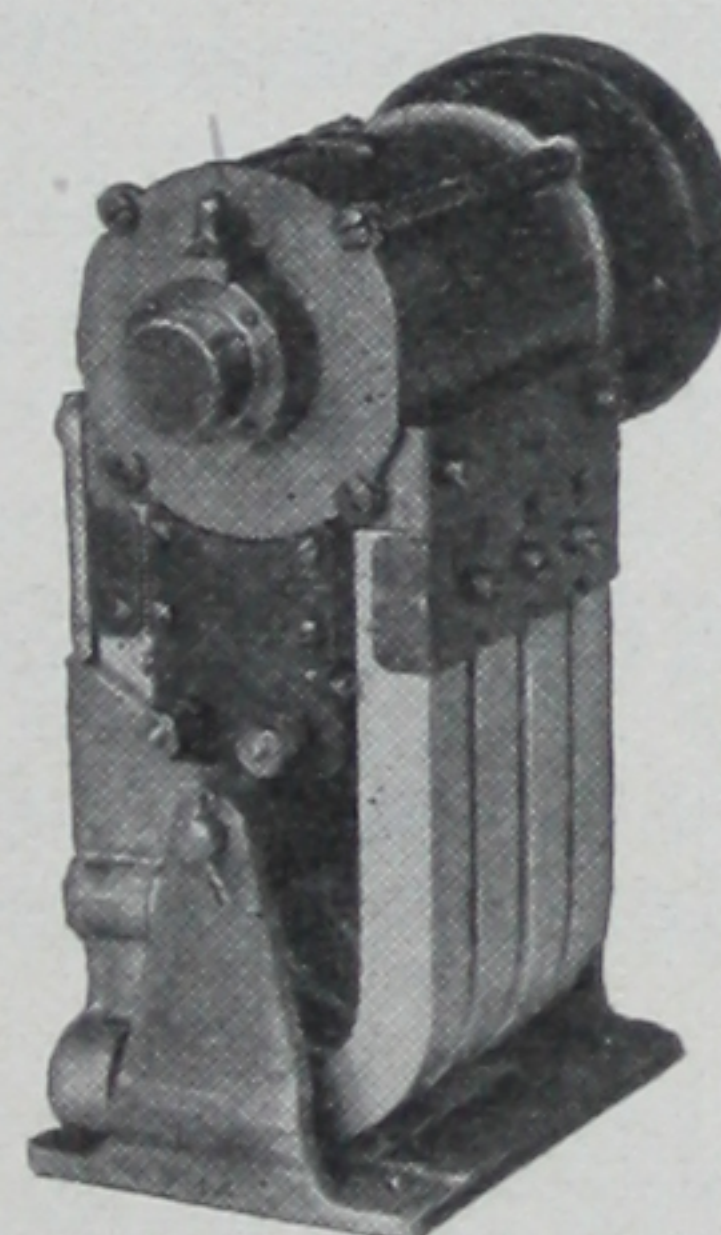
When installing friction drive Magneto, mount its base sufficiently close to the fly-wheel, so that the Generator is just a little nearer to the fly-wheel than would allow it to assume a vertical position. This places its spring under good compression, which prevents the friction wheel from slipping.

Friction Drive Generators are regularly furnished with 4-inch friction wheels, but we can furnish 5-inch if desired for extra large fly-wheels or 3-inch for extra small fly-wheels, also belt pulleys from 1 $\frac{1}{2}$  to 4 $\frac{1}{2}$  inches in diameter.



**Model DS—3 Magnet—\$27.50**  
Code—"Doris"

**Model DL—4 Magnet—\$35.00**  
Code—"Dolly"



**Model ES—3 Magnet—\$27.50**  
Code—"Ellis"

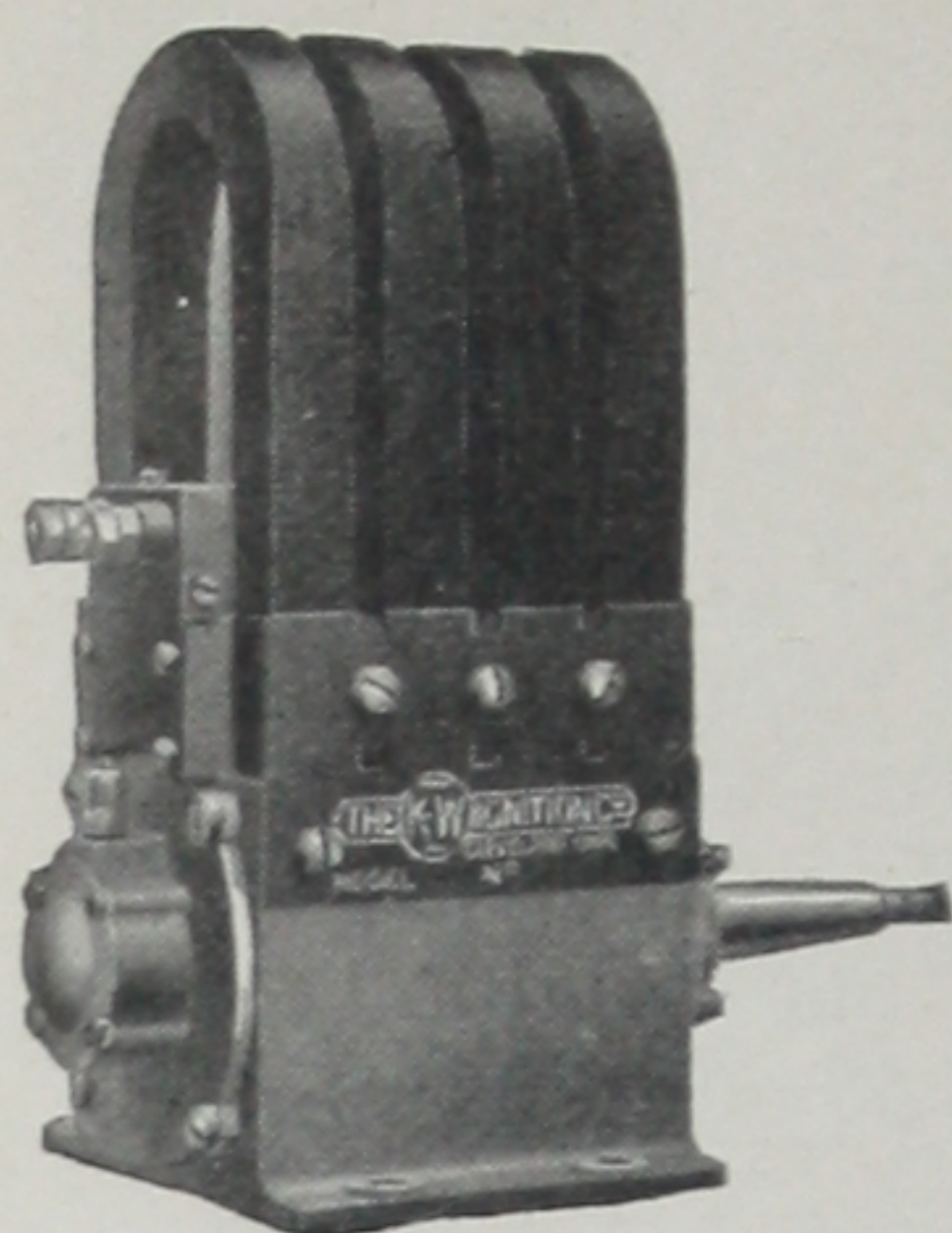
**Model EL—4 Magnet—\$35.00**  
Code—"Etty"

### DIMENSIONS

	Model DS	Model DL	Model ES	Model EL
Base.....	5 x 5 $\frac{1}{4}$ in.	4 $\frac{7}{8}$ x 6 in.	5 x 4 $\frac{3}{4}$ in.	6 x 5 in.
Around Magnets.....	4 x 4 $\frac{1}{2}$ in.	4 x 5 $\frac{1}{2}$ in.	3 $\frac{3}{4}$ x 3 $\frac{1}{2}$ in.	3 $\frac{3}{4}$ x 4 in.
Height.....	9 $\frac{3}{4}$ in.	10 $\frac{3}{4}$ in.	9 $\frac{3}{4}$ in.	10 $\frac{3}{4}$ in.
Shaft.....	$\frac{5}{8}$ in.	$\frac{5}{8}$ in.	$\frac{5}{8}$ in.	$\frac{5}{8}$ in.
Length over all.....	7 $\frac{1}{2}$ in.	8 $\frac{1}{2}$ in.	7 $\frac{1}{2}$ in.	8 $\frac{1}{2}$ in.
Weight.....	20 lbs.	24 lbs.	19 lbs.	25 lbs.



## BELT DRIVE K-W LOW TENSION MAGNETOS OR ALTERNAT- ING CURRENT GENERATORS

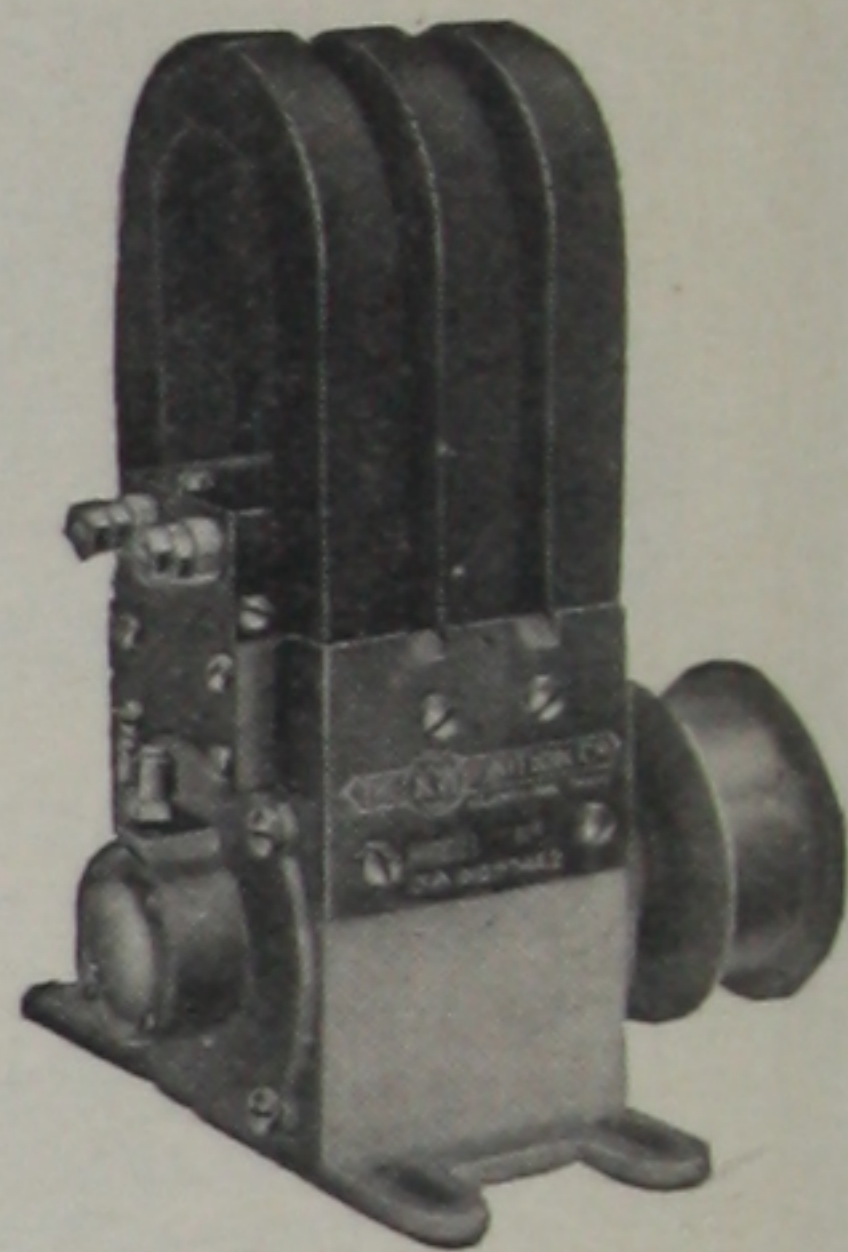


**Model AL—4 Magnet—\$35.00**  
For Belt Drive Only  
Code—"Amy"

### DIMENSIONS

	Model AL	Model SA
Base.....	4 x 5 in.	6¼ x 3 in.
Height.....	10½ in.	9½ in.
Around Magnets ..	3¾ x 4 in.	3 x 3¾ in.
Diameter shaft....	5/8 in.	5/8 in.
Length of shaft over all.....	8½ in.	7½ in.
From bottom to center of shaft..	1⅞ in.	1⅞ in.
Weight.....	22 lbs.	15 lbs.

**Model SAI—3 Magnet. Same  
as SA, with Special Ignition  
only winding—\$25.00**  
Code—"Sailer"



**The K-W Special  
Model SA—\$25.00**  
Code—"Specialess"

Models on this page can not be used for friction drive, as there is no spring base to keep the friction wheel in firm contact.

Belt drive models are regularly supplied with 3½" diameter belt pulley for 1" wide belt. This is the proper size for engines having fly-wheel from 12 to 24 inches in diameter. We can furnish 1½, 2, 2½, 3, 3½ and 4½ inch belt pulley if desired, all for 1 inch wide belt. Do not use round belt.

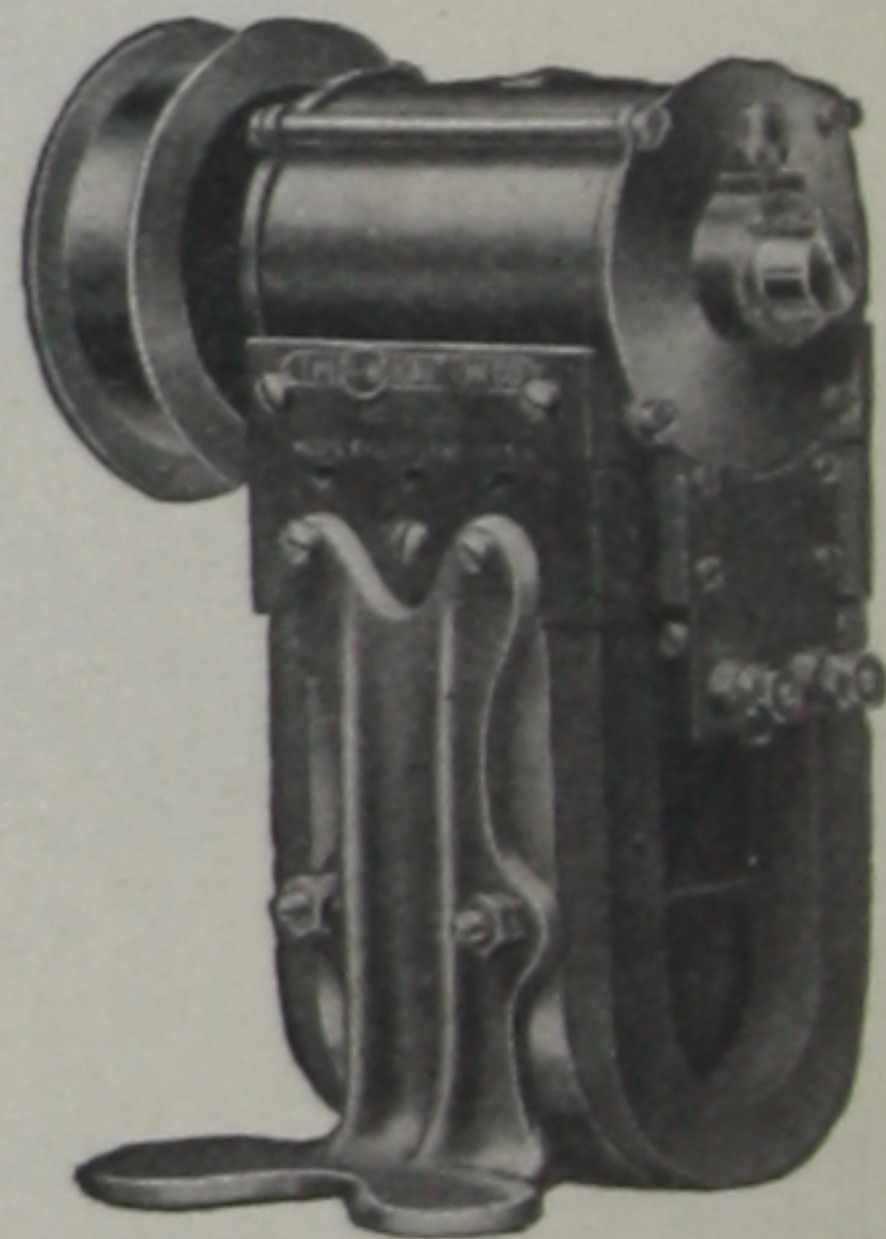
Don't hammer on end of Magneto shaft, nor attempt to force pulley on if too tight, as this is liable to put bearings out of adjustment.

### MODEL FS

This Magneto is mounted by simply bolting Magneto bracket to frame of car or engine.

Belt drive only can be used, as there is no spring base, required for friction drive. Model FS is 9½" high, and the bracket is 2½" x 5".

We furnish "Aqua" water proof belting for the Generators shown on this page which is the highest grade belt we know of. Price 40 cents per foot. Patent fasteners furnished free.



**Model FS—3 Magnet—\$27.50**  
Code—"Ferris"

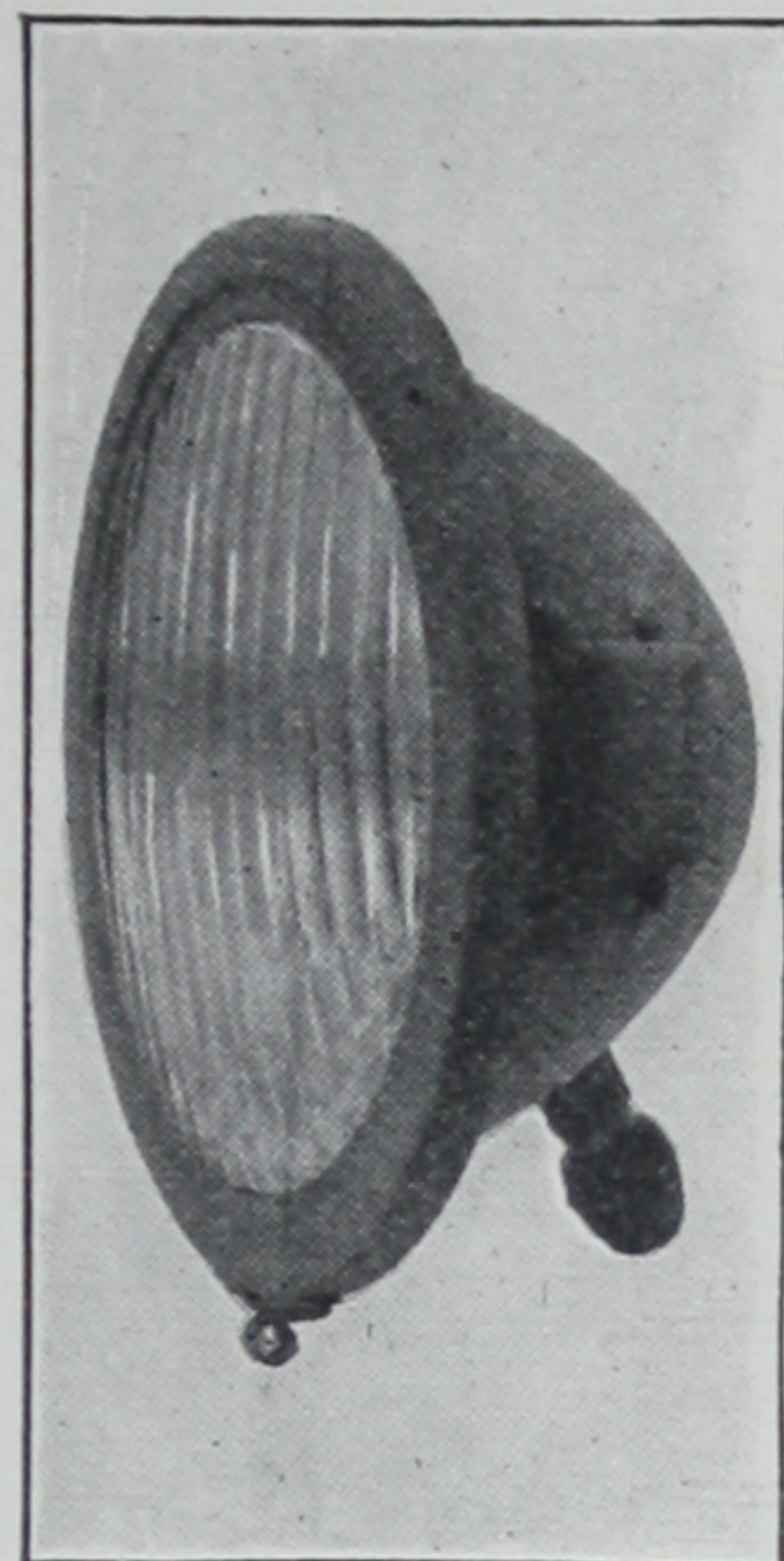


## K-W ELECTRIC HEADLIGHT OUTFITS FOR TRACTORS

The \$40.00 COMPLETE OUTFIT is choice of any three-magnet Generator and lamps.

The \$50.00 COMPLETE OUTFIT is choice of any four-magnet \$35 Generator and lamps.

Head Lamps, complete with bulbs, switch, and 10 feet of wire . . . . . \$15.00



Each outfit consists of Generator, Wire, Switch, Bulbs, a Trouble Lamp and two Head Lights, one for steering, and one for the plows.

If desired, we will furnish a foot pedal with either outfit instead of a switch, and it can then be arranged to take the friction wheel off fly-wheel in the day-time, when not in use.

In ordering, be sure to specify the Model Generator wanted or give some idea of how it is to be installed.

### THE SIMPLEST ELECTRIC HEADLIGHT OUTFIT

The current for the K-W Electric Lighting Outfit is taken direct from the Generator. There is NO Storage Battery, NO Commutator, NO complicated cut-outs, NO Ammeter, NO difficult connections to make or any delicate electrical instruments to get out of order or go wrong. Therefore, we say the simplest and best Electric Headlight Outfit in the world.

The K-W Lighting System requires no charging, and is always ready to give an abundance of light at a moment's notice, at any time engine is running. No provision is made for lights when engine is not running, as this would require a storage battery.

The Three-Magnet Generators described herein will light two 16-candle-power (two  $2\frac{1}{2}$  ampere) bulbs. With the reflectors in K-W Lamps this will give two 1600 candle-power headlights.

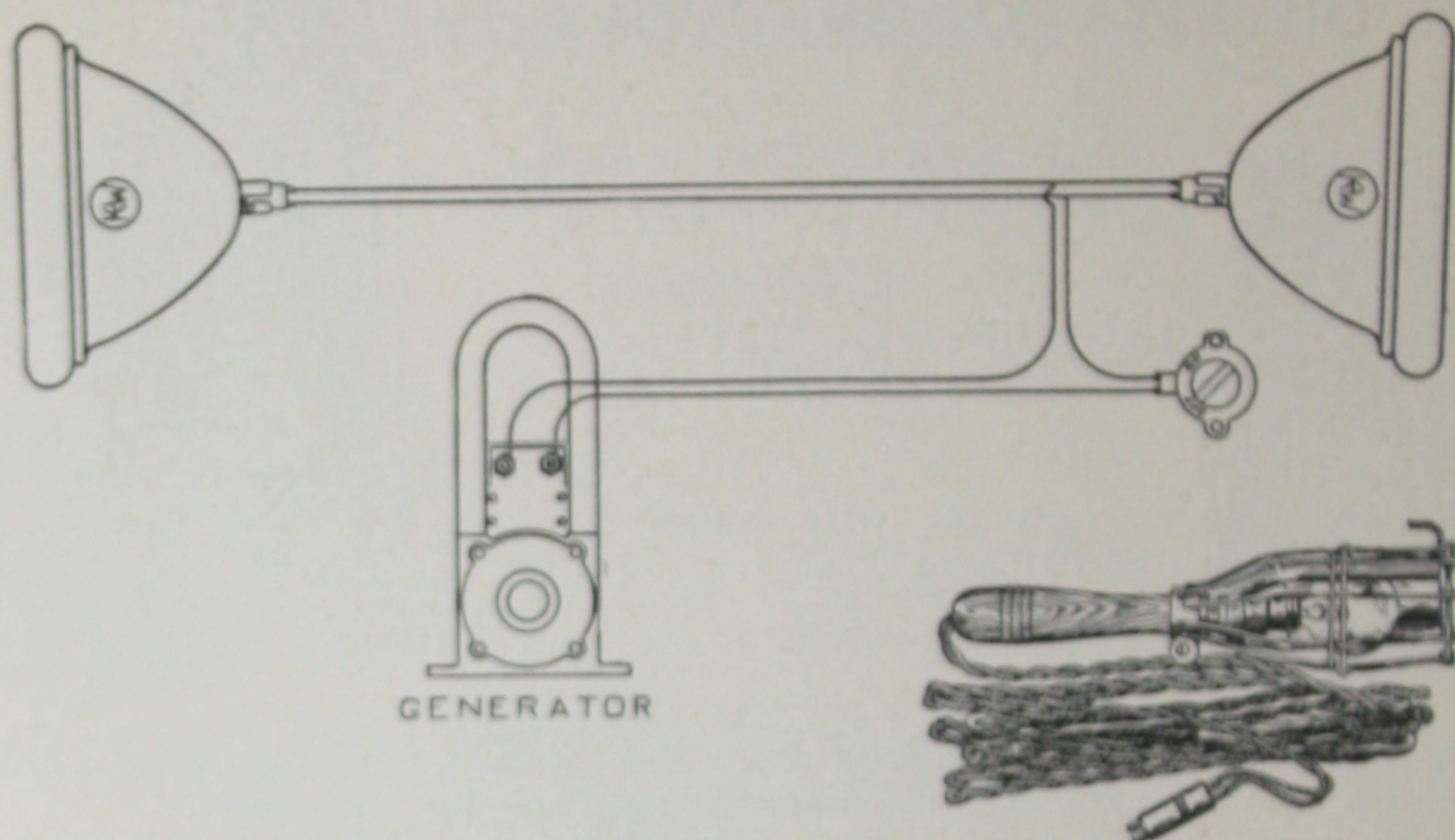
To do this requires five amperes of current. If you had a Hundred Ampere Hour Battery, it would, *theoretically*, last twenty hours on this discharge, but, *practically*, would not last over ten hours, because they do not hold up for these heavy discharges, even if you keep them fully charged.

The Four-Magnet Generators are the same as the Three-Magnet, except for the extra Magnet, and they will light two 20-candle-power (two 3 ampere) bulbs.

The K-W Magneto delivers this output all the time the engine is running, and without any care, except a few drops of oil every week.



## WIRING DIAGRAM FOR TRACTOR LIGHTING



For Plowing, one lamp can be mounted in front as headlight and one on rear for plows.

Portable Trouble Lamp as shown in the illustration is an Ediswan socket mounted on a wooden handle, with the bulb protected by a strong wire cage. This trouble lamp is especially adapted for use about tractor engines for adjustment work and is furnished complete with bulb, 10 ft. cord and  $\frac{1}{2}$ " connector.

Do not connect Magneto to batteries in any way, but have circuits entirely independent. If the bulbs do not come to full candle-power and cast a yellowish light, use a bulb of smaller amperage. On the other hand, if the bulb burns too brightly, throwing an exceedingly white light at slow speeds, the bulbs are too small, and a larger amperage should be used. In cases of this kind, the life of the bulb would be very short.

It is always advantageous to have a couple of extra bulbs on hand.

The K-W Headlights are fitted with Ediswan sockets.

When buying extra bulbs, insist on the proper size and proper amperages. For the three magnet outfit 6 volt  $2\frac{1}{2}$  ampere bulbs are required, and for the four magnet outfit 6 volt 3 ampere bulbs.

NOTE.—The proper way to measure headlight bulbs is in Amperes, not candle-power, as candle-power allows too wide a range of variance. To get the approximate candle-power, multiply the Volts by the Amperes; and to get the approximate searchlight power when used in K-W Parabolic Reflectors, multiply the candle-power of the bulb by 100.



## SUGGESTIONS FOR INSTALLING K-W LIGHTING GENERATORS FOR TRACTOR LIGHTING

### WE DO NOT FURNISH BRACKETS OR BASES

Following will be found several illustrations of how K-W Generators may be mounted on different makes of Tractors.

No attempt has been made to show all the Tractors on which these Outfits can be used, as this would take more pages than the catalog contains, but by referring to the different methods shown, it can be easily figured out how installation can be made on your own particular Tractor.

The main point to bear in mind is that the Generator should be driven at a speed of from 2000 to 3000 R. P. M., and any way that this can be accomplished will prove satisfactory.

The illustrations following, outline just enough of each Tractor to identify it, and show the position in which the K-W Generator may be mounted.

Where Friction Drive Generators are used, they may be released during the day, when light is not required; thus saving all unnecessary wear and prolonging the life of the Generator indefinitely.

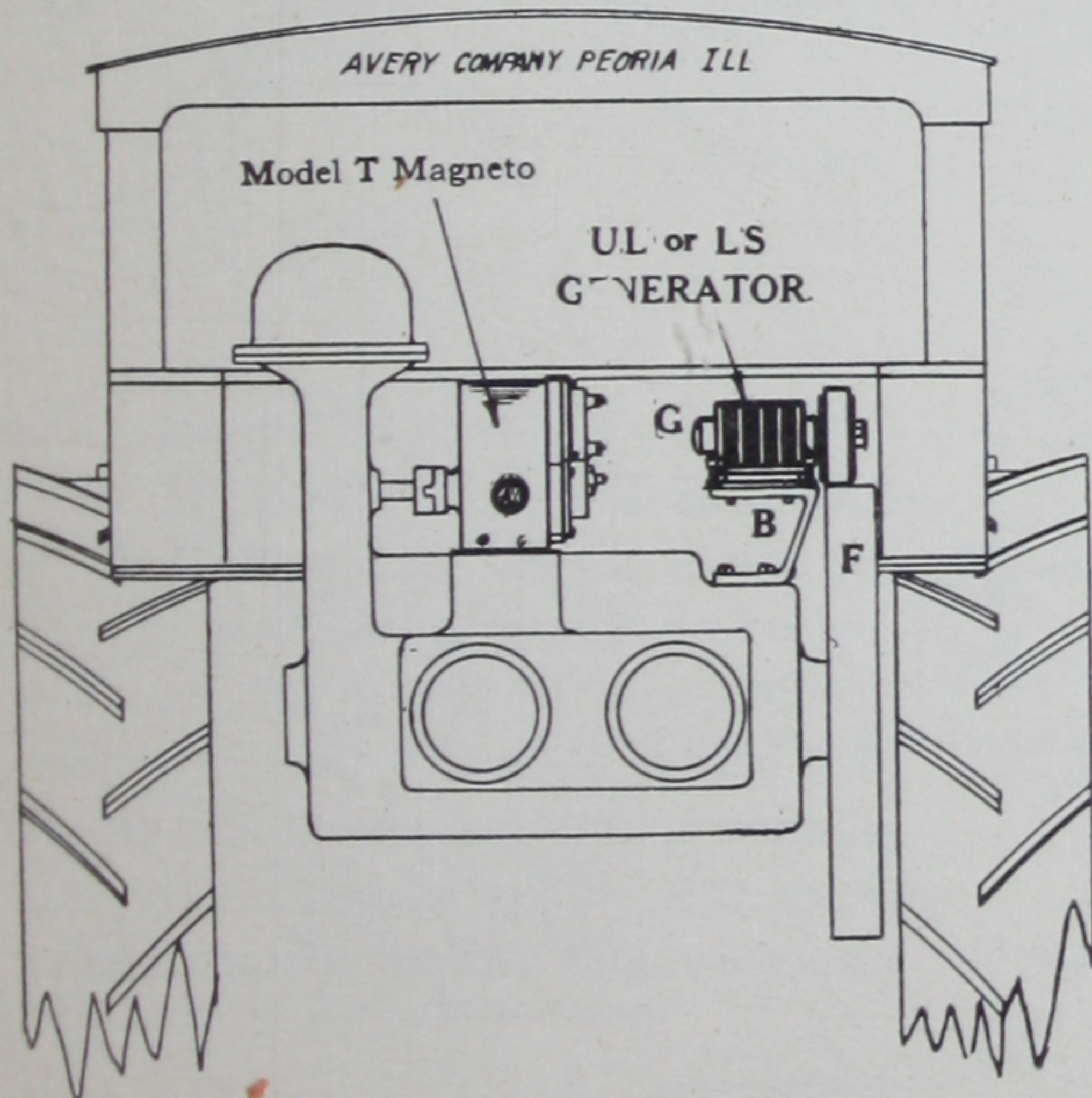


Illustration shows Avery Tractor. Model LS or UL is used. Bracket (B) can be made from a bent piece of boiler plate and Generator driven by Friction from top of fly-wheel (F). Base (B) is bolted on, utilizing two of the bolts which will be found on the engine as shown.



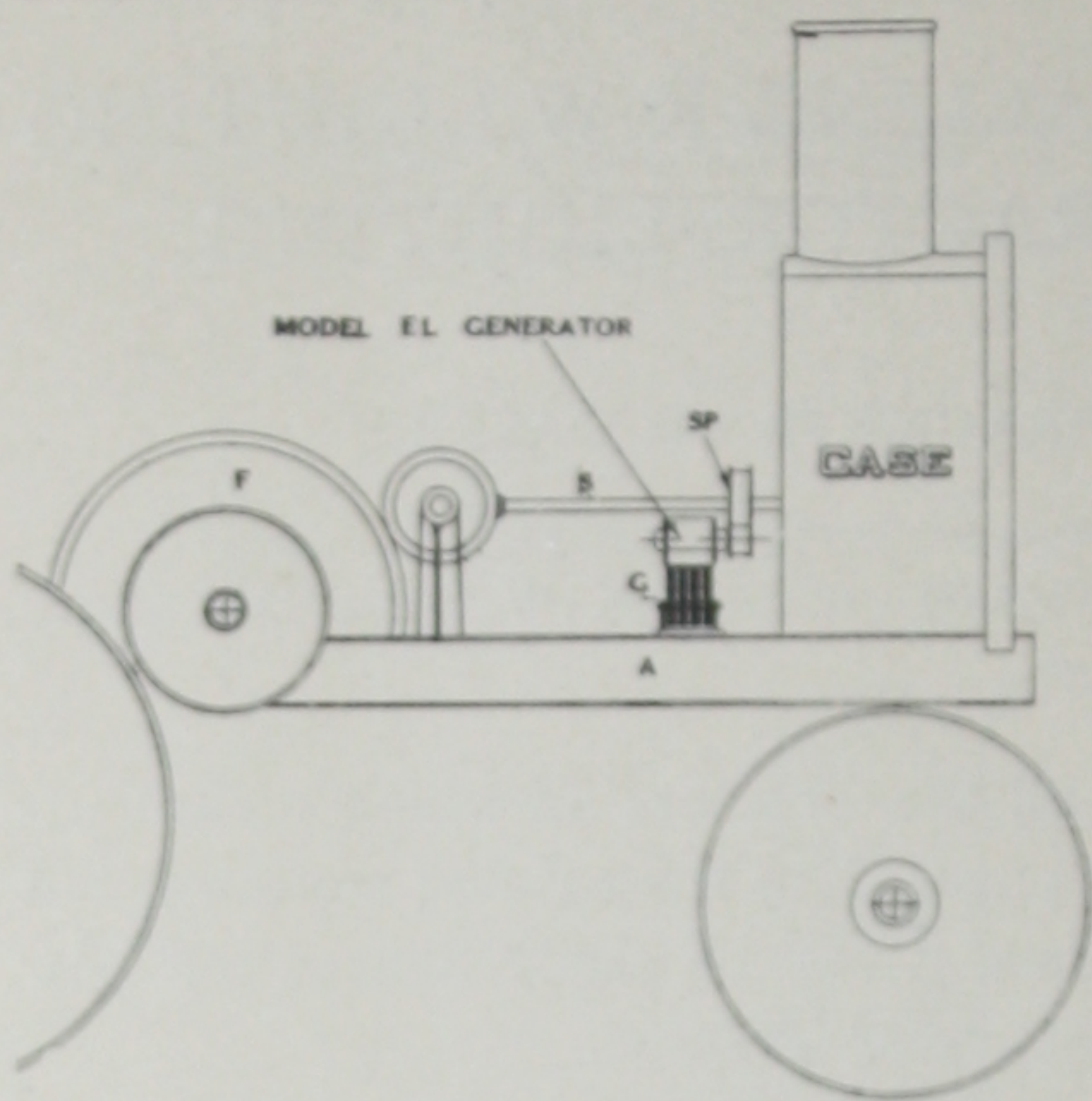
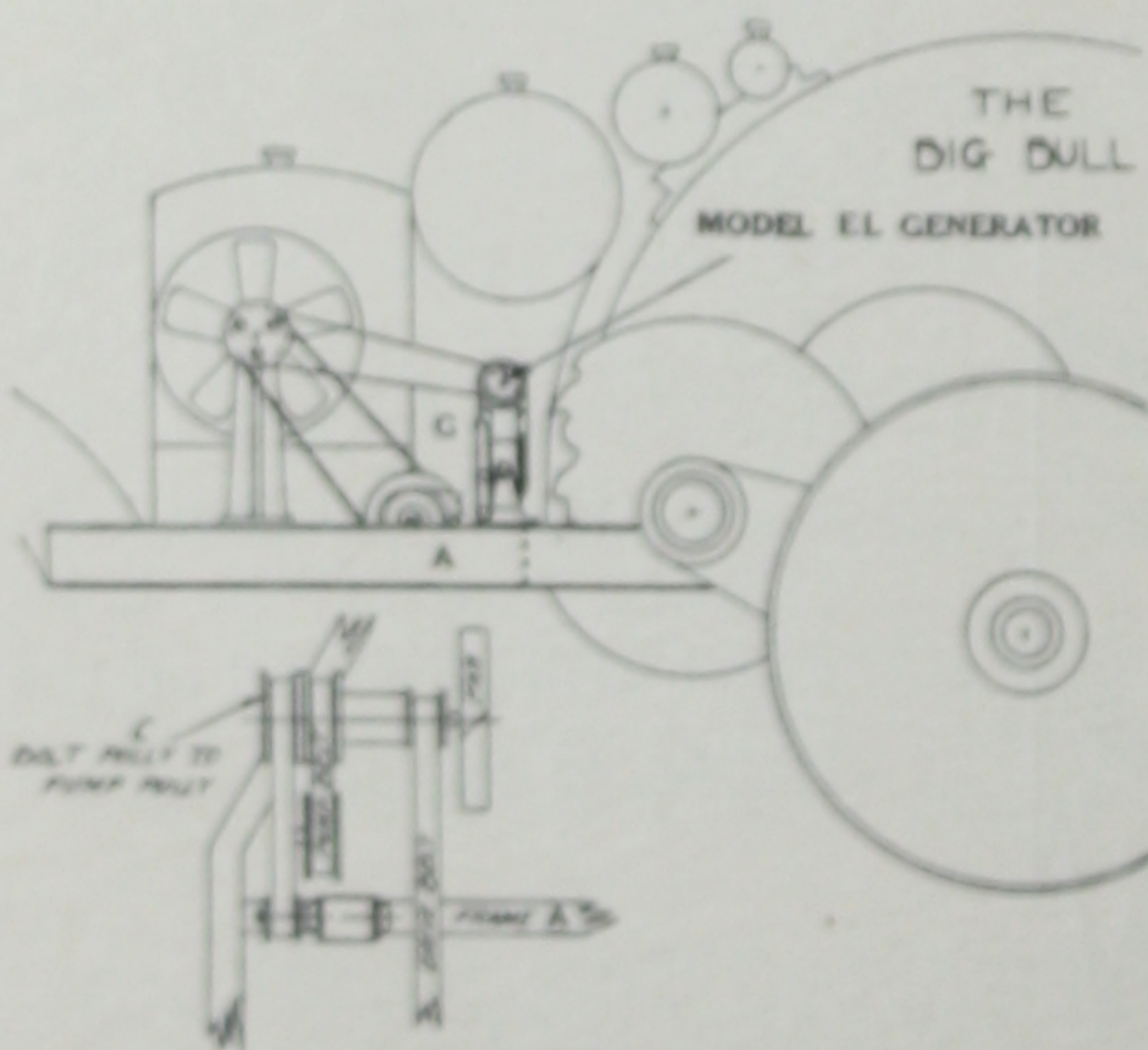
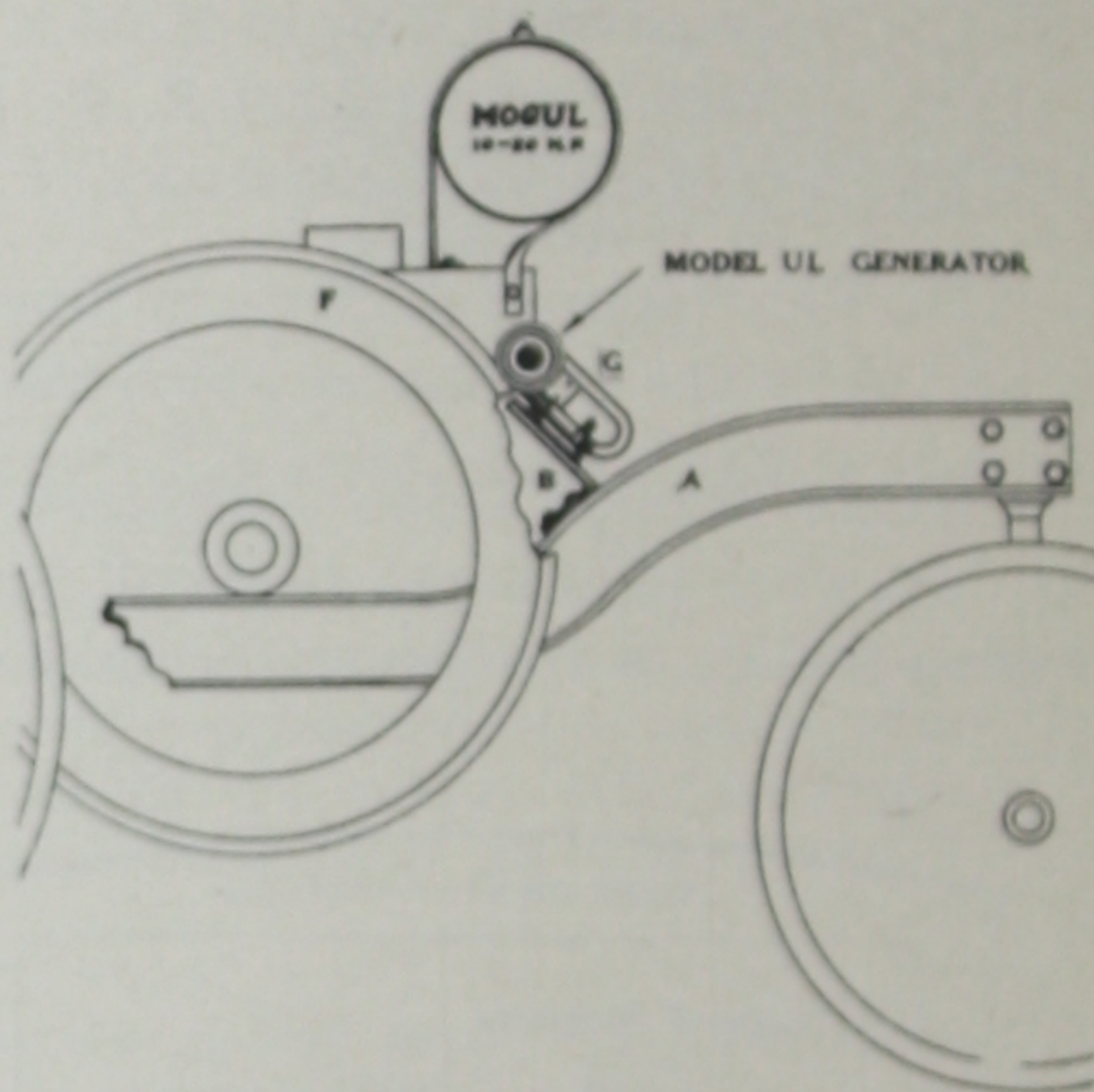


Illustration to the left, shows the Case Tractor. A split pulley is used on the fan shaft, and the generator "G" is bolted to the frame "A" of the tractor, and the generator is driven by a one-inch flat belt. Model EL Generator is used here, and the mounting is very simple and satisfactory. The Spring tension on the generator, keeps the belt tight at all times.

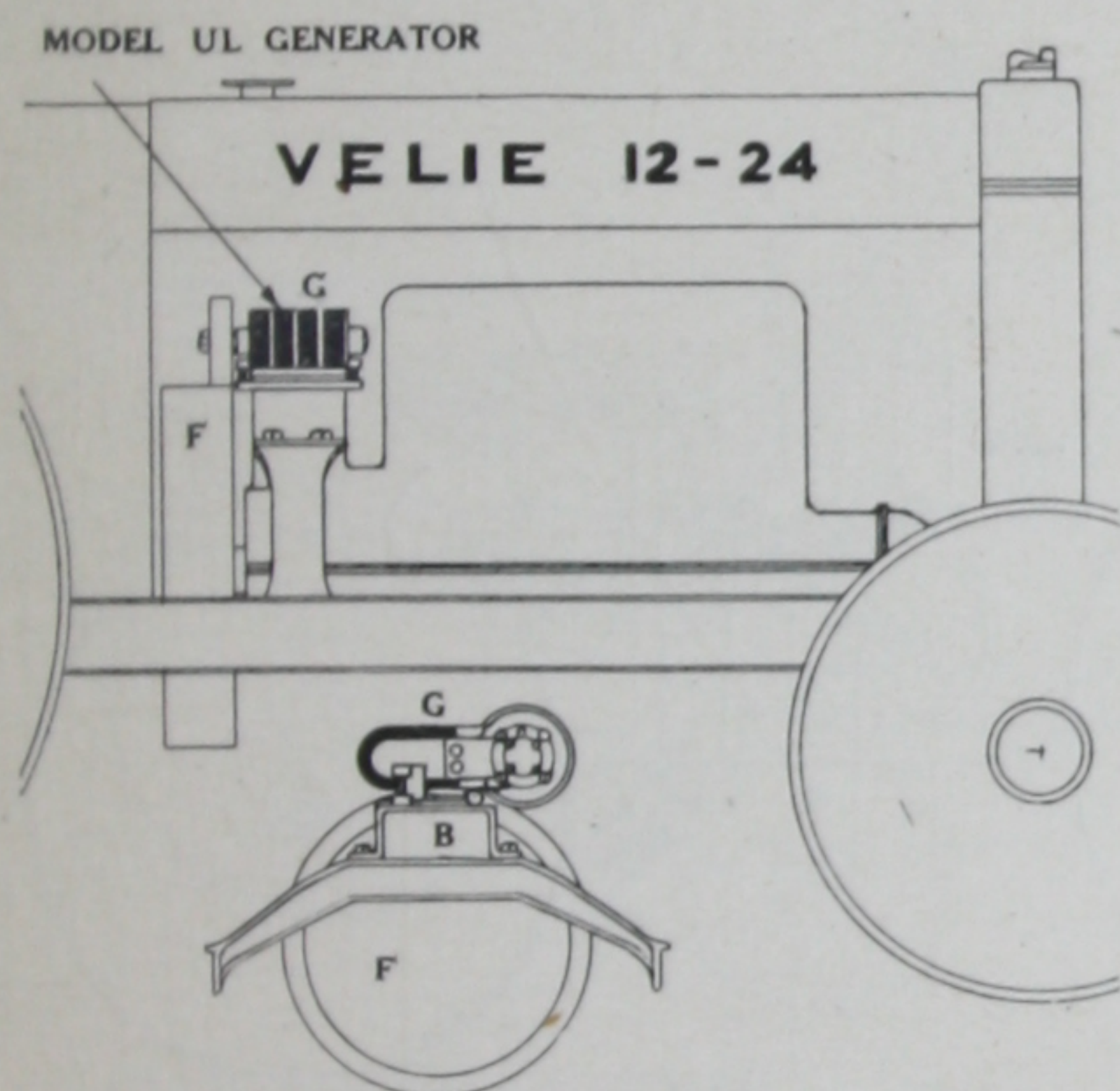
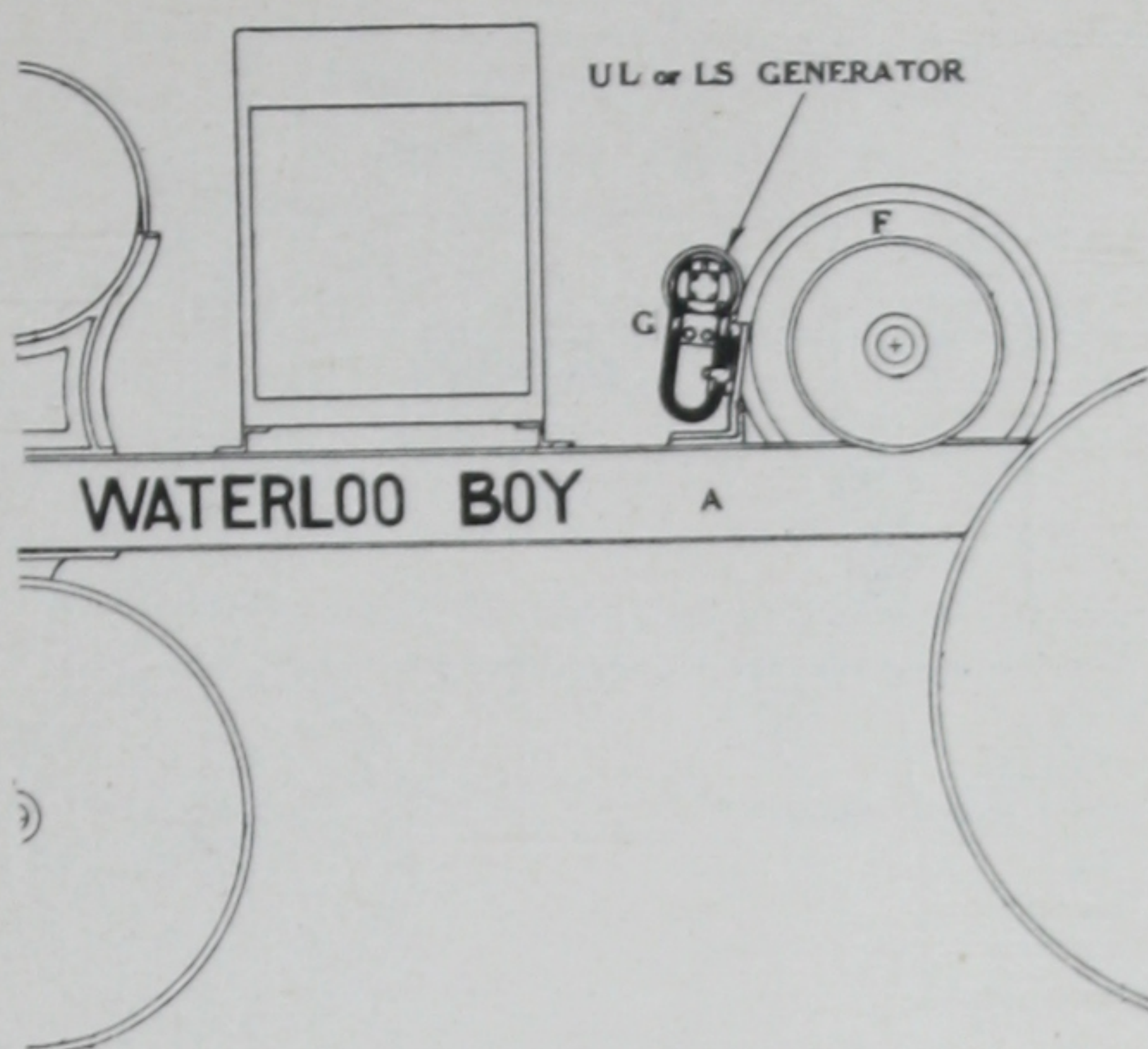
On the Mogul 10-20, Model UL or LS Generator is used, with a five-inch friction wheel. A bracket "B" is made, as shown in illustration, bent at about an 90 degree angle, and bolted to the frame "A" of the tractor. The generator is driven by friction from the fly-wheel "F" and may be released when light is not desired.



This illustration shows the Big Bull Tractor. Model EL Generator is used. Generator "G" is bolted to the cross member of the frame, and a pulley for one-inch flat belt is bolted to the fan pulley, as shown, and the generator is driven from this. This makes a very satisfactory and simple installation.

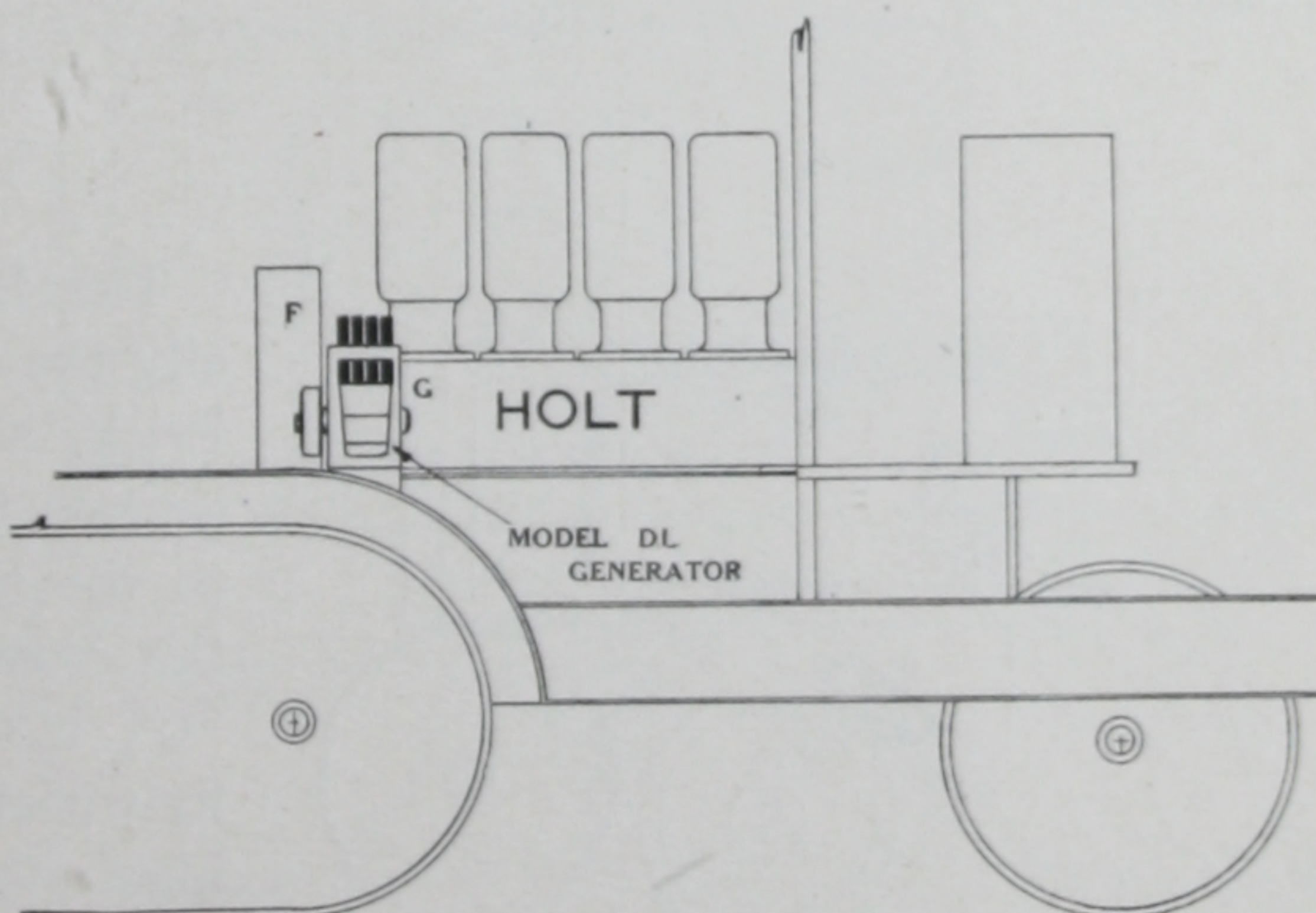


Model UL or LS Generator may be used on the Waterloo Boy. A bracket is made at slightly more than 80 degrees angle, and is bolted to the top of the frame "A," and the generator is driven by friction from the fly-wheel "F". This installation permits of releasing the generator when light is not required, and is very simple to install.

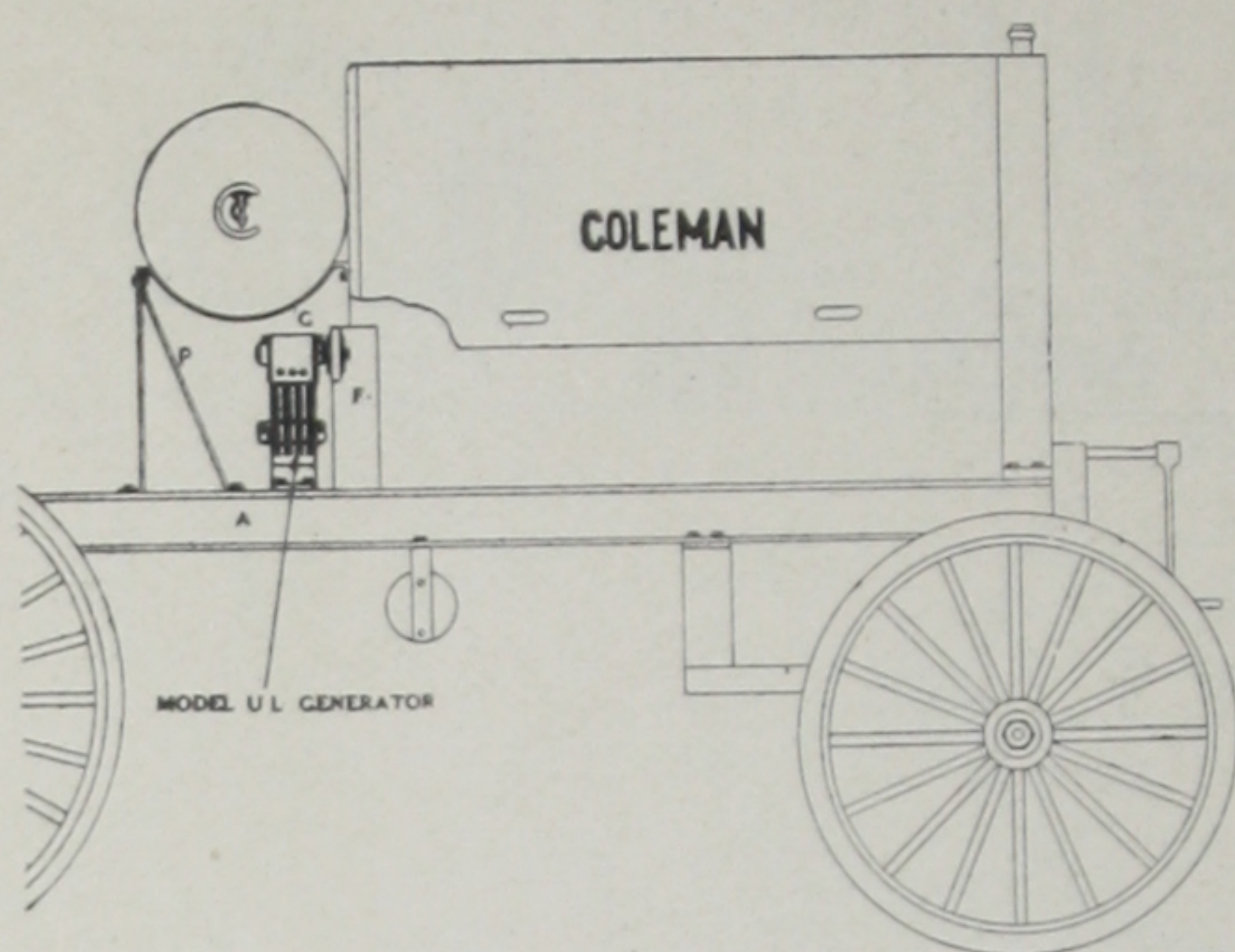


On the Velie 12-24, either the Model UL or LS Generator may be used. The base "B" is made of boiler plate and bolted to the cross-member between the fly-wheel "F" and the engine, as shown in the small illustration. Generator "G" is driven by friction from the top of the fly-wheel "F" and may be released when not in use.

On the Holt Tractor, either the Model DL or DS may be used. The generator "G" is bolted to the top of the frame "A", and is driven by friction from the fly-wheel "F". This model generator may also be released from tension, when light is not required.

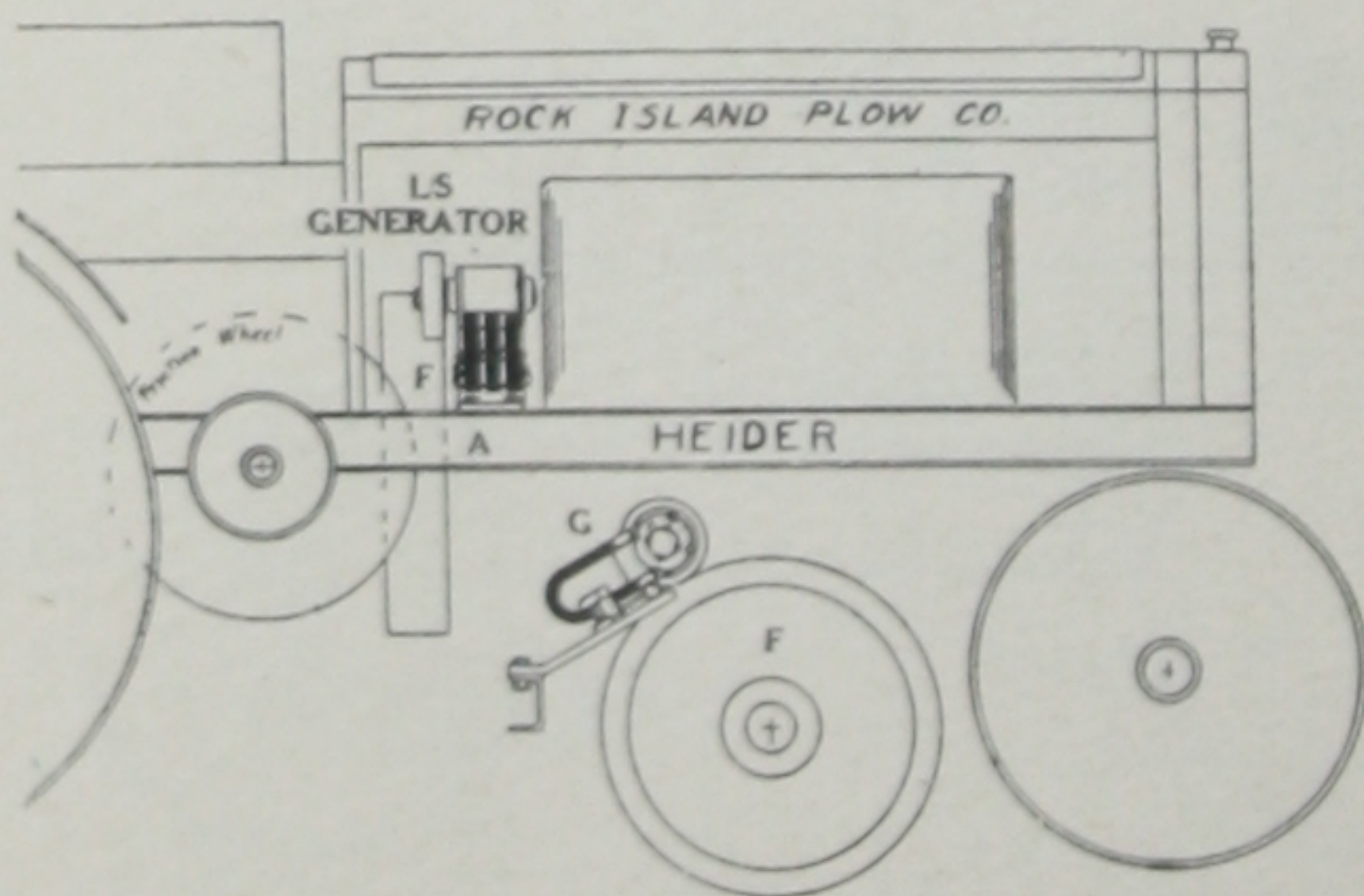
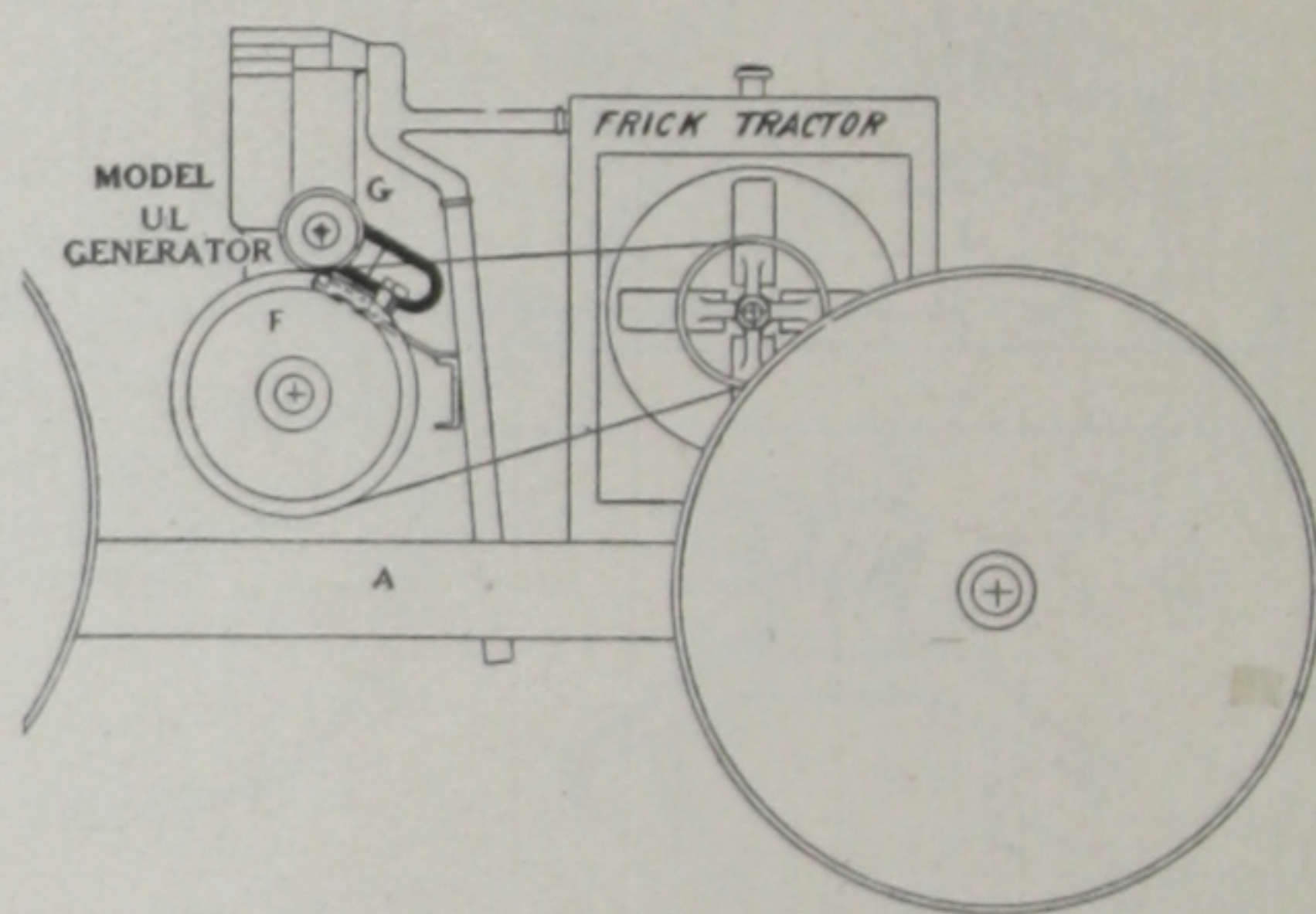






The Coleman Tractor uses either Model UL or LS Generator. A bracket "B" is bolted to the top of the frame "A" and the generator "G" is driven by friction from the fly-wheel "F". The angle of the bracket on which the generator is mounted, can be easily determined when the generator is installed.

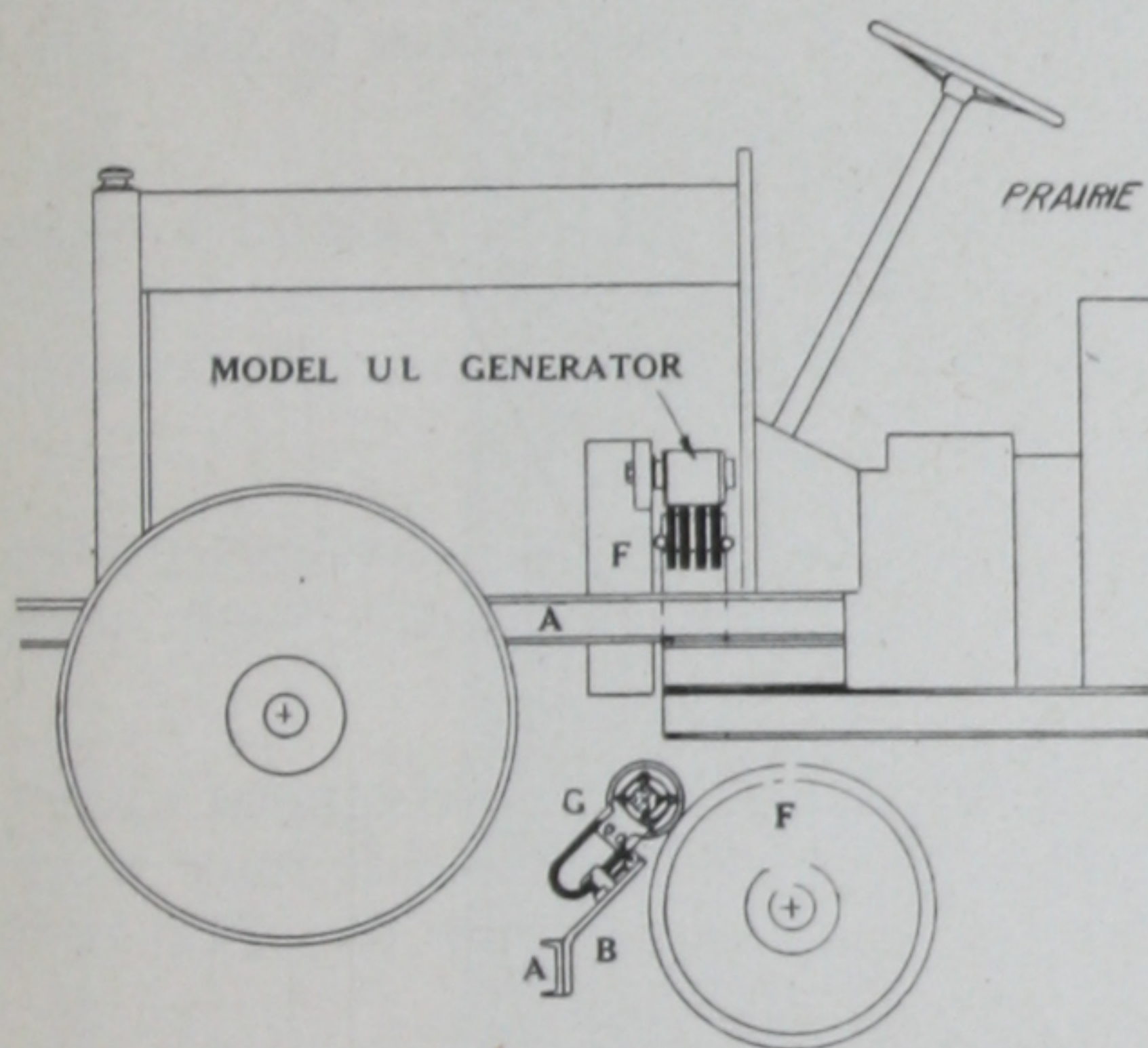
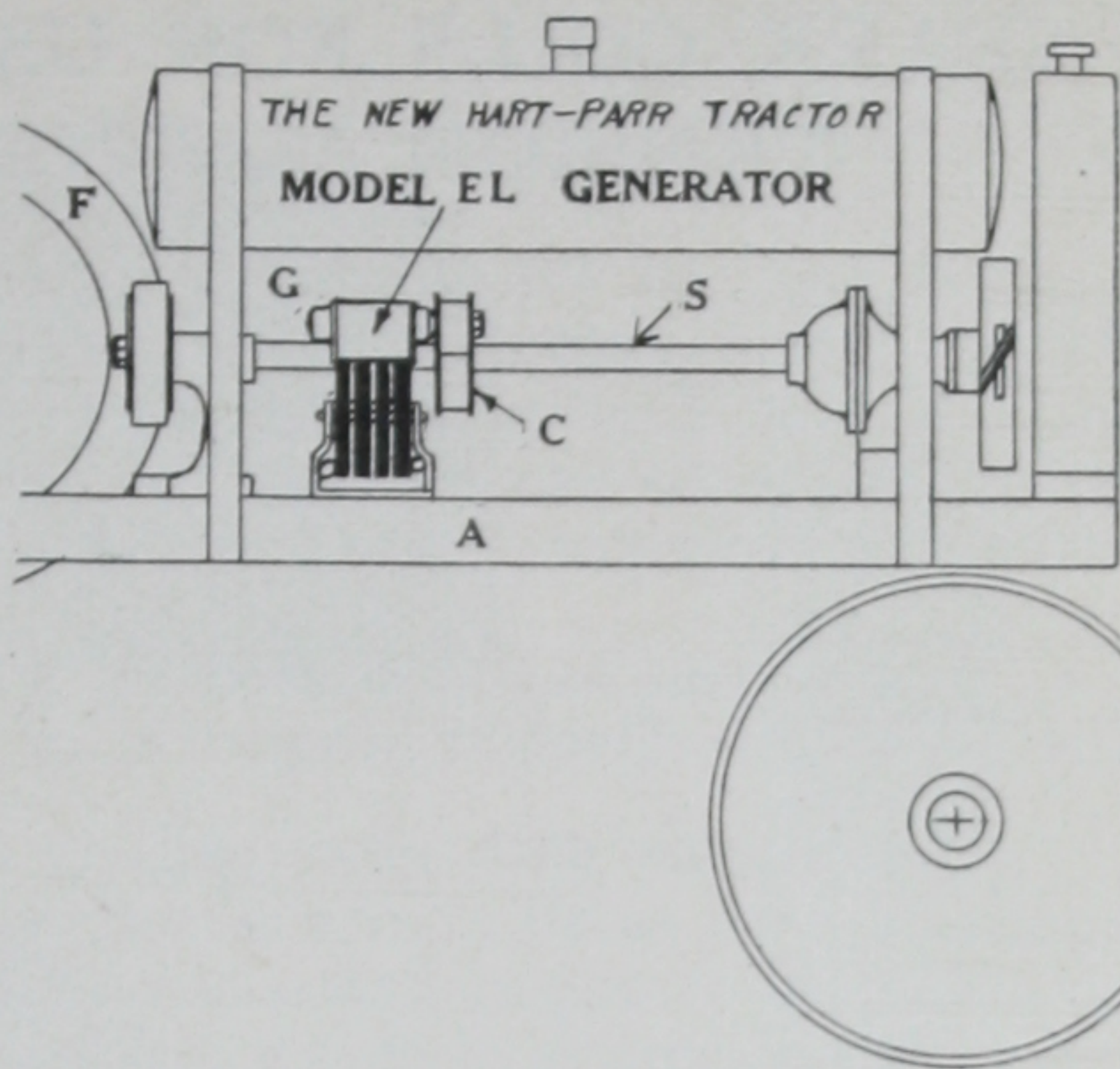
The Frick Tractor, as shown by accompanying illustration, requires either the Model LS or UL Generator. The base "B" is mounted to the cross frame of the tractor and the generator "G" is mounted firmly on this, and the generator is driven by friction from the fly-wheel "F". This illustration differs very little from the several others illustrated.



The Heider Tractor has practically the same style mounting as the Frick, shown above, with the exception that the base "B" is bolted to the main frame "A" instead of the cross frame, and the generator "G" is driven by friction from the fly-wheel, "F", as shown in the two illustrations to the left. Model LS or UL Generator may be used.

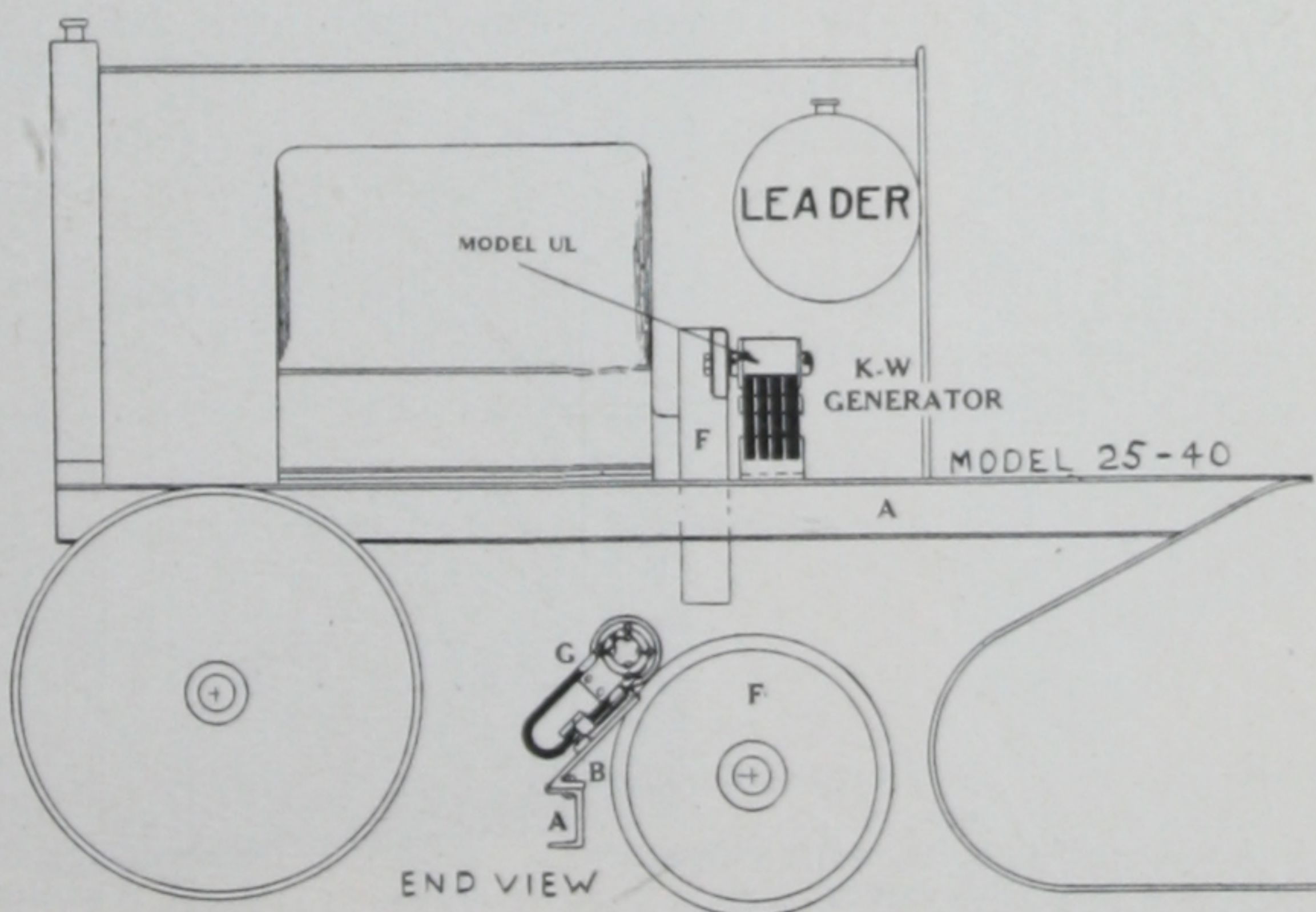


The new Hart-Parr Tractor is shown using the Model EL Generator, which is mounted similar to the Case Tractor, shown on page 8, a split pulley of six-inch diameter being used on the pump shaft "S". The generator "G" is bolted to the main frame "A", and is driven by a one-inch flat belt. The fan shaft "S" being driven by friction from the fly-wheel "F", gives the generator the required speed, and is very satisfactory and easy to install.



On the Prairie Dog Tractor, either the Model UL or LS Generator may be used, by making a base "B" at about 45 degrees angle. This base is bolted to the side of the frame "A", as shown in the two illustrations herewith, and the generator "G" is driven by friction from the fly-wheel "F". All friction driven generators may be released when not in use.

The Leader 25-40 Tractor uses the Model UL Generator. The base "B" is bolted to the top of the frame "A" and bent at an angle of about 135 degrees. The generator "G" is mounted on the base "B", and driven from the fly-wheel "F" by friction. The two illustrations herewith, give a very clear idea of this installation.





## SPARK COILS FOR USE WITH THE K-W LOW TENSION MAGNETO FOR IGNITION

On page 13 will be found illustrated the different types of Spark Coils which we manufacture. These are for use in connection with either batteries or K-W Low Tension Generators, for ignition on all types of engines where it is impossible to use a High Tension Magneto. No Spark Coil is required when the generator is used for lighting only.

IF best results are desired for ignition, K-W Coils **MUST** be used with the K-W Low Tension Magnetos for the reasons as given below.

The trouble with most coils is in their vibrators, which are frequently equipped with small points of soft, spongy contacts, which weld or freeze together on the strong magneto current, thus causing the engine to miss. Furthermore the condensers of cheap coils are not made of sufficient capacity to carry a strong current. These coils may be all right for a weak battery current, because it is not strong enough to break through the weak places in the insulation, which the HOT Magneto spark would do.

The K-W Magneto will **NOT** work with coils that will only stand a weak battery current, for if it would it would not do what we guarantee it to do, that is, give a much hotter spark than batteries with a consequent increase in power and saving in fuel.

It requires a coil with a good fast vibrator, having large contact points that will not stick or freeze together and a powerful condenser, such as is contained in the K-W Coil.

This is why we do not guarantee the K-W Low Tension Magneto unless a K-W Coil is used with it. If the old coil is in good condition it may work with the K-W Low Tension Magneto, but we can't guarantee it. For best results get a K-W Coil and be sure.

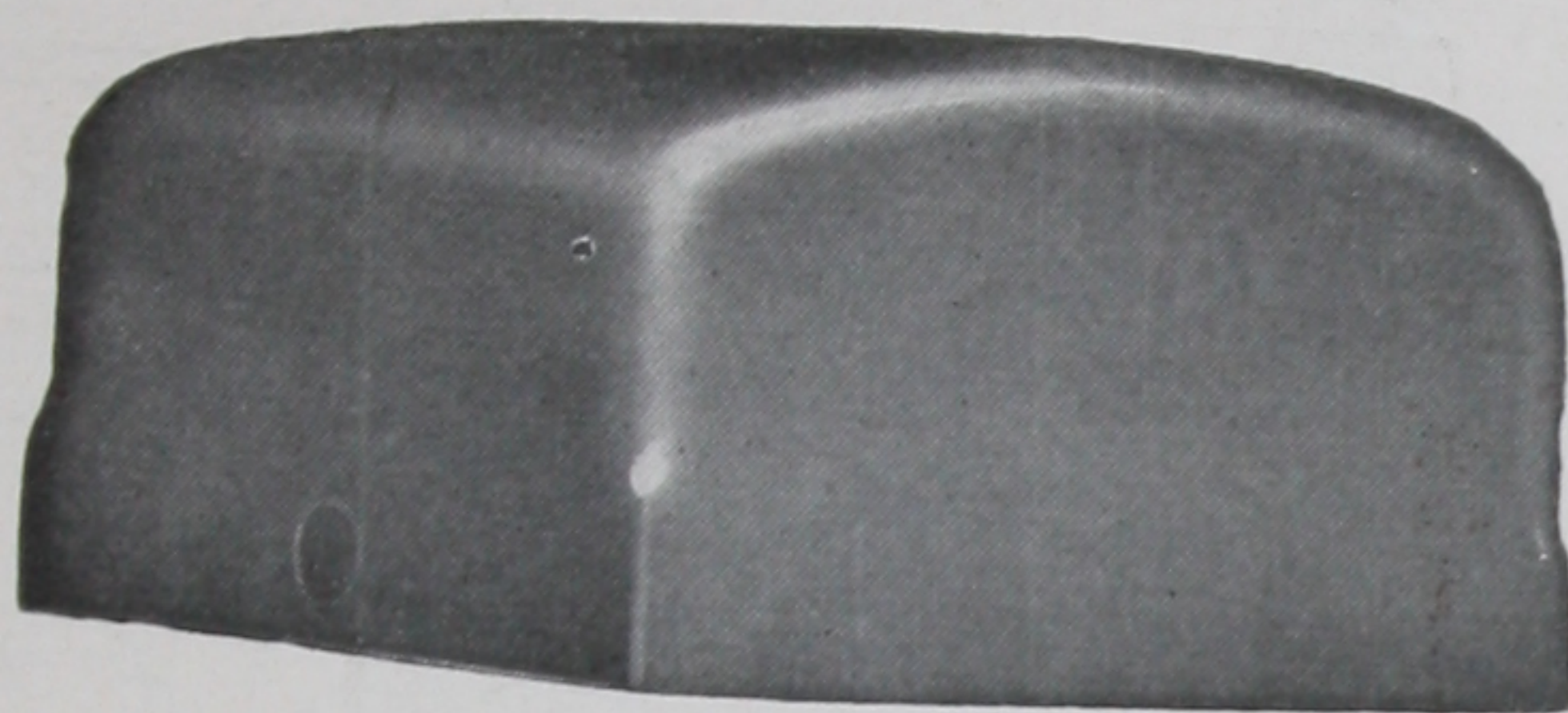
The K-W Low Tension Magneto will not burn out or injure a coil of good quality, no matter how fast the engine runs, because it produces an alternating current which is self-regulating, due to the impedance of the coil and circuit.

The K-W Models "M", "K" and "01" Spark Coils are made especially to meet the requirements of those who want good ignition and a dependable Coil for their motor boat or stationary engine. These Coils are made by our latest improved process and have the same internal construction as Dash Coils, but they are mounted in plain boxes instead of dash.

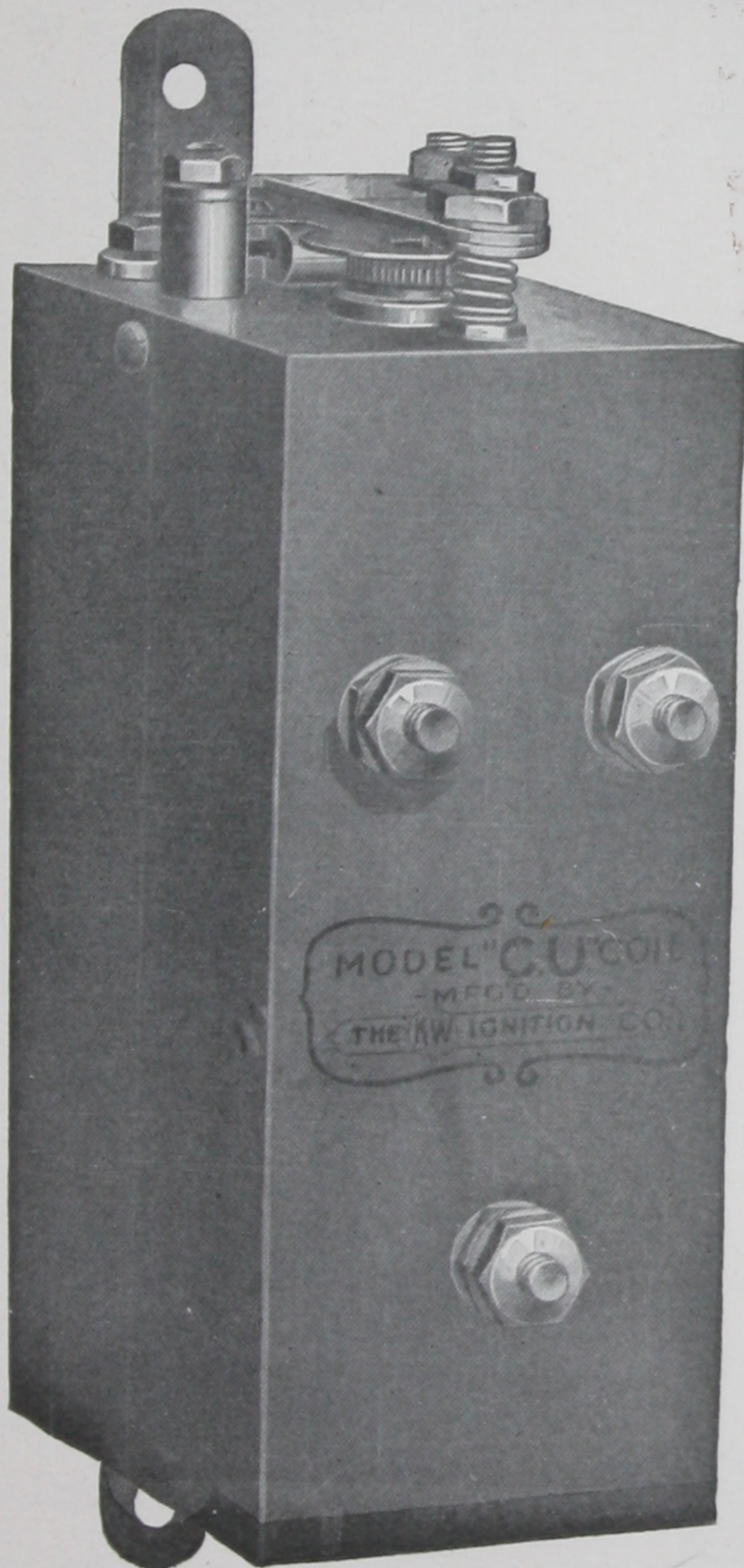
## COIL PARTS

K-W Sparkite Coil Vibrator springs and contacts, per pair.....	\$0.50	Switch plugs.....	\$0.15
Unit for regular coils, with vibrators....	6.00	Coil adjusting screw and spring.....	.15
Dash coil box with cover.....	6.00	Secondary coil terminals.....	.25
Dash coil box covers.....	1.25	K-W Autolock Switch.....	3.50
Dash coil box brackets, each.....	.75	Lighting switch.....	.35
		K-W Kick Switch, illustrated on coil...	1.50





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## COILS



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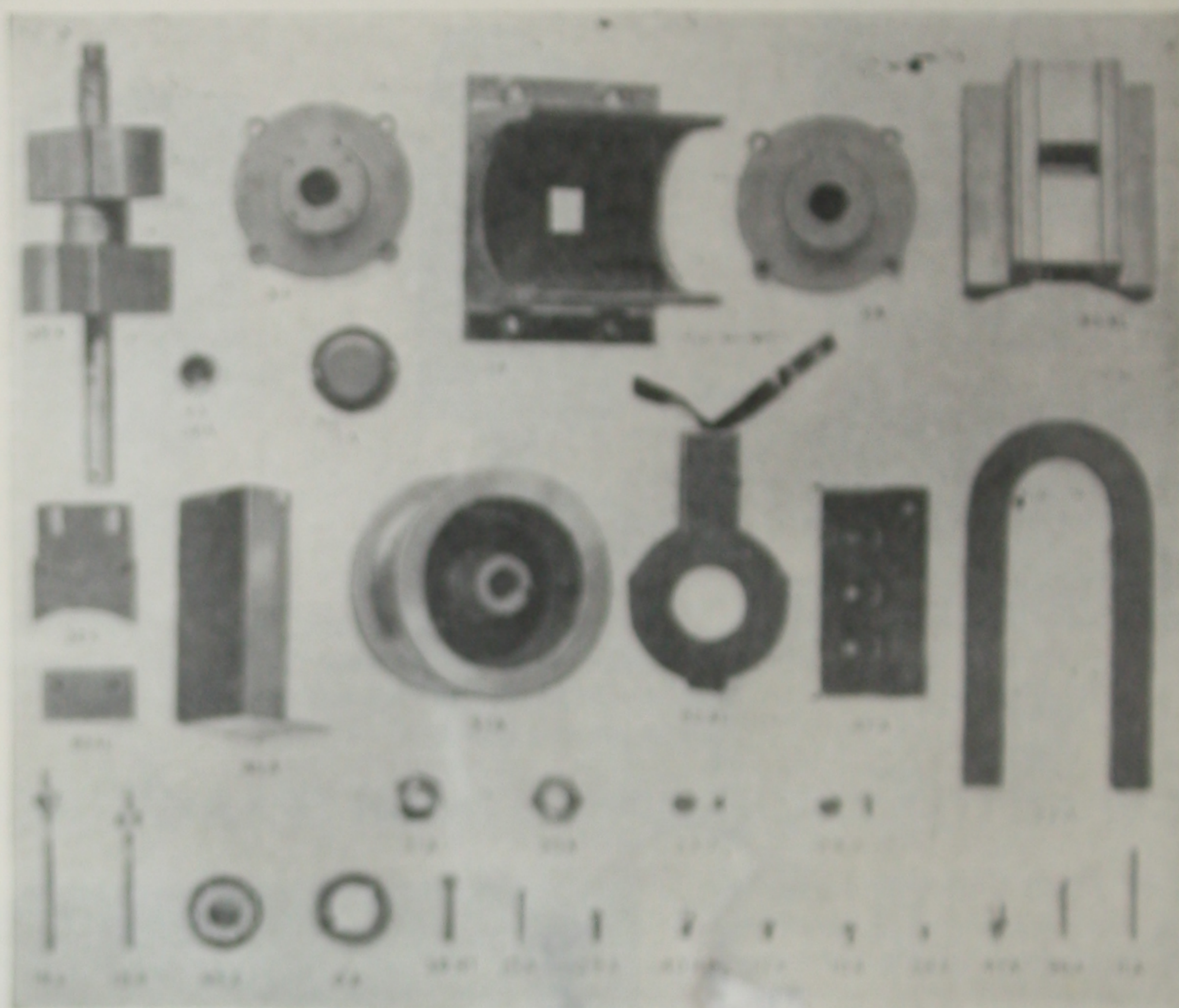
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# PRICE LIST OF K-W LOW TENSION MAGNETO PARTS



Cat No.	Part No.	Name	Models Used On	Price
20-A	17-45	Rotor Taper Shaft	Magnet, Annular Bearings	\$1.00
	17-46	Rotor Taper Shaft	All 2 Magnet, Annular Bearings	4.00
	18-241	Rotor Straight Shaft	All 2 Magnet Cup & Cone Bearings	4.00
	21-280	Rotor Straight Shaft	All 4 Magnet Cup & Cone Bearings	4.00
	21F-200	Rotor Taper Shaft	Magnetos with 2" wide Pulley	4.00
	22-200	Rotor Straight Shaft	Magnetos with 2" wide Pulley	4.00
2-A	17-2	Annular End Piece	All Taper shaft except Next Item	2.00
	21F-200	Annular End Piece Pulley End	Magnetos with 2" wide Pulley	2.00
2-A		End Piece Pulley End	All Straight shaft except B	2.00
2-A		End Piece Cap End	All Straight shaft except B	2.00
2-A	21-214	End Piece Cap End	Mod B & B L only	2.00
	21-220	End Piece Pulley End	Mod B & B L only	2.00
7-A	17-12	Dust Cap for end piece (or hat)	All straight shaft Magnetos	.25
	17-4	Annular End Piece Cap, Plain	End Opposite Pulley, all Taper shaft Magnetos	.50
	17-4	Annular End Piece Cap, Drilled	Pulley End, all Taper shaft Magnetos	.50
1-A	17-120	Base (2 Magnet)	AL-AIC-AM-CM	4.00
	28-207	Base (2 Magnet)	SA-SAL	4.00
	21-230	Base (2 Magnet)	B & B L only	4.00
	17-20	Case, White Metal 2" long	18-18-18-MC	1.00
	17-22	Case, White Metal 4" long	11-11-11-FL	1.00



Cut No.	Part No.	Name	Models Used On	Price
80-AL	LT-95	Pole Piece, complete.....	All 4 Magnet Magn. ex. next item..	\$4.00
	LT-96	Pole Piece, complete.....	M. L. & B. L. only .....	4.00
	LT-97	Pole Piece, complete.....	All 3 Magnet Magnetos.....	4.00
	CM-307	Pole Piece, complete.....	All 5 Magnet Magnetos.....	4.00
60-AL	LT-200	Winding, Assembled.....	All 4 Magnet Magnetos .....	2.50
	LT-202	Winding, A—Special.....	All 3 Magnet Magn. except S.A.I ..	2.50
	LT-201	Winding, Assembled.....	AM-CM (MAKE & BREAK).....	2.50
	SI-10	Winding, Assembled.....	S.A. I.....	2.50
45-A	LT-31	Case—"Gun Metal".....	All 3 Magnet Magnetos.....	1.00
	LT-32	Case—"Gun Metal".....	All 4 Magnet Magnetos.....	1.00
47-A	LT-38	Name Plate or Magnet Clamp 3" ..	All 3 Magnet Magnetos.....	1.00
	LT-40	Name Plate or Magnet Clamp 4" ..	All 4 Magnet Magnetos.....	1.00
	CM-306	Name Plate or Magnet Clamp 4" ..	All 5 Magnet Magnetos.....	1.00
27-A	LT-93	Magnets 6".....	SA-ES-DS-LS.....	3.00
	LT-94	Magnets 7".....	AL-EL-DL-FL-MI-ML-UL-AM-CM ..	3.00
	MS-332	Magnets 5".....	MS only.....	3.00
95-A	LT-7	Annular Bearings (not sold in parts)	All taper shaft Magnetos except next item.....	3.50
	HP-302	Annular Bearings, Pulley end.....	ALC Pulley end fits in part H. P. 299 for 2" wide pulleys.....	4.00
	LT-1089	Bearing complete, Cup & Cone.....	All Straight shaft Magnetos.....	2.00
	LT-8	Bearing Cups, $\frac{5}{8}$ " shaft.....	All Straight shaft Magnetos.....	1.00
	LT-9	Bearing Cones, $\frac{5}{8}$ " shaft.....	All Straight shaft Magnetos.....	.75
	LT-10	$\frac{1}{4}$ " Steel Balls (13 to set).....	All Straight shaft Magnetos, per set	.35
	LT-11	Bearing Collar Rivet $\frac{1}{8}$ x21-32 long.....	All Straight Shaft Magnetos.....	.05
	LT-12	Keys for Bearing Cone.....	All Straight Shaft Magnetos.....	.10
6-A	LT-16	Annular Brass Nuts.....	All Straight Shaft Magnetos.....	.60
9-A	LT-42	Plain Collar.....	All 4 Magnet Magnetos.....	.25
14-A	LT-43	Plain Collar.....	All 3 Magnet Magnetos.....	.25
	LT-44	Drilled Collar.....	All Straight Shaft Magnetos.....	.25
21-A	LT-45	Adjusting Nut, 7-16 Hex.....	All 4 Magnet Straight Shafts.....	.10
	LT-46	Adjusting Nut, 7-16 Hex.....	All 3 Magnet Straight Shafts.....	.10
20-A	LT-47	Jam Nut.....	All Straight Shafts.....	.10
32-A	LT-69	Fibre Binding Post mount.....	All.....	.25
62-AL	LT-68	Fibre Bridge—Drilled.....	All.....	.20
19-A	LT-27	Stem Binding Post—Long.....	All 3 Magnet Magnetos.....	.10
18-A	LT-28	Stem Binding Post—Short.....	All 3 Magnet Magnetos.....	.10
19-A	LT-29	Stem Binding Post—Long.....	All 4 Magnet Magnetos.....	.10
18-A	LT-30	Stem Binding Post—Short.....	All 4 Magnet Magnetos.....	.10
23-A	LT-71	7-16" Hex. x $\frac{1}{8}$ x10-32 Brass Nut.....	All (For Binding Post).....	.05
24-A	LT-71	7-16" Hex. x $\frac{1}{8}$ x10-32 Brass Nut.....	All (Lock nut for Binding Post).....	.05
	FL-315	$\frac{1}{2}$ x14-20 Iron.....	FL.....	.05
	MS-342	12-24 Hex. Iron.....	MS.....	.05
	MS-343	5-16-18 Hex. Iron Nut.....	MS.....	.05
	LT-72	$\frac{1}{2}$ x10-32 Brass Washer.....	All (For Binding Post).....	.05
	MS-340	$\frac{1}{4}$ " Plain Lock Washer.....	MS (For Bracket Screws).....	.05
	MS-341	5-16 Plain Lock Wash.....	IS (For Bracket Screws).....	.05
47-A	LT-15	Oil Cup.....	All Magnetos.....	.15
15-A	LT-73	1"x6-32 Rd. Hd. Brass Screws.....	All (In Fibre Bridge).....	.05
40-HT	LT-74	$\frac{1}{2}$ x12-24 Fil. Hd. Ir. Screws.....	All (For end piece, Upper Holes)...	.05
	LT-75	$\frac{3}{8}$ x12-24 Fil. Hd. Ir. Screws.....	All (For End Piece, Lower Holes)...	.05
16-A	LT-76	7-16x10-32 Fil. Hd. Ir. Screws.....	All (For End Piece Taper shaft)....	.05
	LT-83	7-16x10-32 Fil. Hd. Ir. Screw.....	Pointed.....	.05
	LT-77	$\frac{1}{2}$ x8-32 Fil. Hd. Ir. Screws.....	All (Binding Post Mount).....	.05
17-A	LT-78	$\frac{1}{4}$ x8-32 Fil. Hd. Ir. Screws.....	All (For Case End LT-31&32).....	.05
28-A	LT-79	$\frac{1}{4}$ x6-32 Fil. Hd. Ir. Screws.....	All (For Cases Sides).....	.05
36-HT	LT-82	$1\frac{1}{8}$ x12-24 Fil. Hd. Ir. Screws.....	All (To hold Magneto Clamps).....	.05
	LT-84	$\frac{5}{8}$ x12-24 Fil. Hd. Ir. Screws.....	DL-EL-UL-DS-ES-LS-MS for Mag. Clamp.....	.05
	LT-85	$1\frac{3}{8}$ x12-24 Fil. Hd. Ir. Screws.....	DL-EL-FL (To hold Magnet Cl.)...	.05
	MS-338	$1\frac{1}{4}$ x12-24 Fil. Hd. Ir. Screws.....	MS (To hold Magnet Clamps).....	.05
	LT-80	$\frac{3}{8}$ x12-24 Fil. Hd. Ir. Screws.....	All (To hold Magnet Clamps).....	.05
	LT-14	$\frac{1}{8}$ x4-32 Rd. Hd. Screws.....	BL (To hold Dust Cap).....	.05
96-A	No. 159	Taper Pin for Pulley No. Ox1- $\frac{1}{8}$ .....	All Magnetos with straight shaft...	.05
11-A	No. 59	Taper Pin for Rotor No. 2x1 $\frac{1}{2}$ .....	All Magnetos.....	.05
51-A	LT-142	$1\frac{1}{2}$ x1 Straight Hole Belt Pulley.....		1.00
	LT-152	$1\frac{1}{2}$ x1 Taper Hole Belt Pulley.....		1.00
	LT-140	2x1 Straight Hole Belt Pulley.....		1.25
	LT-123	2x1 Taper Hole Belt Pulley.....		1.25



Cut No.	Part No.	Name	Models Used On	Price
51-A	LT-138	2 1/2"x1 Straight Hole Belt Pulley.....		\$1.50
	LT-154	2 1/2"x1 Taper Hole Belt Pulley.....		1.50
	LT-136	3 1/2"x1 Straight Hole Belt Pulley.....		1.75
	LT-156	3 1/2"x1 Taper Hole Belt Pulley.....		1.75
	LT-132	4 1/2"x1 Straight Hole Belt Pulley.....		2.00
	LT-152	4 1/2"x1 Taper Hole Belt Pulley.....		2.00
	LT-128	2 1/2"x2" Taper Hole Belt Pulley.....		2.50
	LT-130	2 1/2"x2" Straight Hole Belt Pulley.....		2.50
	LT-134	3 1/2"x2" Straight Hole Belt Pulley.....		2.50
	LT-126	4 1/2"x2" Taper Hole Belt Pulley.....		2.50
		4 1/2"x2" Straight Hole Belt Pulley.....		2.50
	LT-161	3" Straight Hole Friction Wheel.....		3.00
	LT-173	3" Taper Hole Friction Wheel.....		3.00
	LT-164	4" Straight Hole Friction Wheel.....		4.00
	LT-176	4" Taper Hole Friction Wheel.....		4.00
	LT-167	5" Straight Hole Friction Wheel.....		5.00
	LT-179	5" Taper Hole Friction Wheel.....		5.00
	DL	Bracket Complete.....		10.00
	EL	Bracket Complete.....		9.00
	UL	Bracket Complete.....		6.00
	DS	Bracket Complete.....		9.00
	ES	Bracket Complete.....		7.50
	LS	Bracket Complete.....		5.00
	LT-18	Rotor Brass Guard.....	All Straight Shaft Magneto	1.00
	MS-337	1/4"x5-16-18 Hex. Cap Screw.....	MS For Bracket.....	.05
	MS-339	1/2" Hex. x 1-5-16 long x 5-16-18 Iron Bolt.....	MS For Bracket.....	.20
	LT-108	5-32"x1 Cotter Pin.....	EL-DL-UL.....	.05
	LT-110	1/4"x1/4 Cotter Pin.....	ES-DS-LS.....	.05
	FL-312	Bracket.....	FL.....	2.50
	MS-354	Bracket.....	MS.....	2.00
	EL-273	Bracket Bottom.....	EL.....	5.50
	DL-250	Bracket Bottom.....	DL.....	6.00
	ES-266	Bracket Bottom.....	ES.....	4.50
	LS-244	Bracket Bottom.....	LS.....	2.50
	DS-291	Bracket Bottom.....	DS.....	6.00
	UL-252	Bracket Bottom.....	UL.....	2.50
	EL-275	Bracket Top.....	EL.....	2.50
	DL-261	Bracket Top.....	DL.....	4.00
	UL-254	Bracket Top.....	UL.....	3.00
	ES-268	Bracket Top.....	ES.....	5.00
	LS-246	Bracket Top.....	LS.....	2.50
	DS-293	Bracket Top.....	DS.....	2.50
	LT-114	Bracket Clamp.....	DS-ES-LS-MS.....	.50
	LT-116	Bracket Clamp.....	DL-EL-UL.....	.75
	EL-271	Bracket Shaft 6 1/2".....	EL.....	.20
	LS-240	Bracket Shaft 4 1/2".....	LS.....	.20
	DL-257	Bracket Shaft 6 1/2".....	DL.....	.20
	UL-249	Bracket Shaft 4 1/2".....	UL.....	.20
	DS-289	Bracket Shaft 5 1/2".....	DS.....	.20
	ES-264	Bracket Shaft 6 1/2".....	ES.....	.20
	LT-25	Black Japanned Coil Springs.....	EL-ES-LS.....	.05
	LT-26	Black Japanned Coil Springs.....	DL-DS.....	.05
	UL-250	Black Japanned Coil Springs.....	UL.....	.05
	BL-324	Black Japanned Flat Steel Spring.....	BL.....	.10
	FL-313	Brace Strap.....	FL-F.....	.20
	FL-314	1/4 Round Strap Bolts.....	FL-F.....	.20
	MS-335	Steel Hanger Bracket R. H.....	MS.....	.15
	MS-336	Steel Hanger Bracket L. H.....	MS.....	.15
	BL-322	Supporting Pin for Base.....	BL.....	.05
	BL-326	Slide Base, Plain.....	BL.....	.50
	BL-328	Slide Base, Formed.....	BL.....	.60

These parts not illustrated

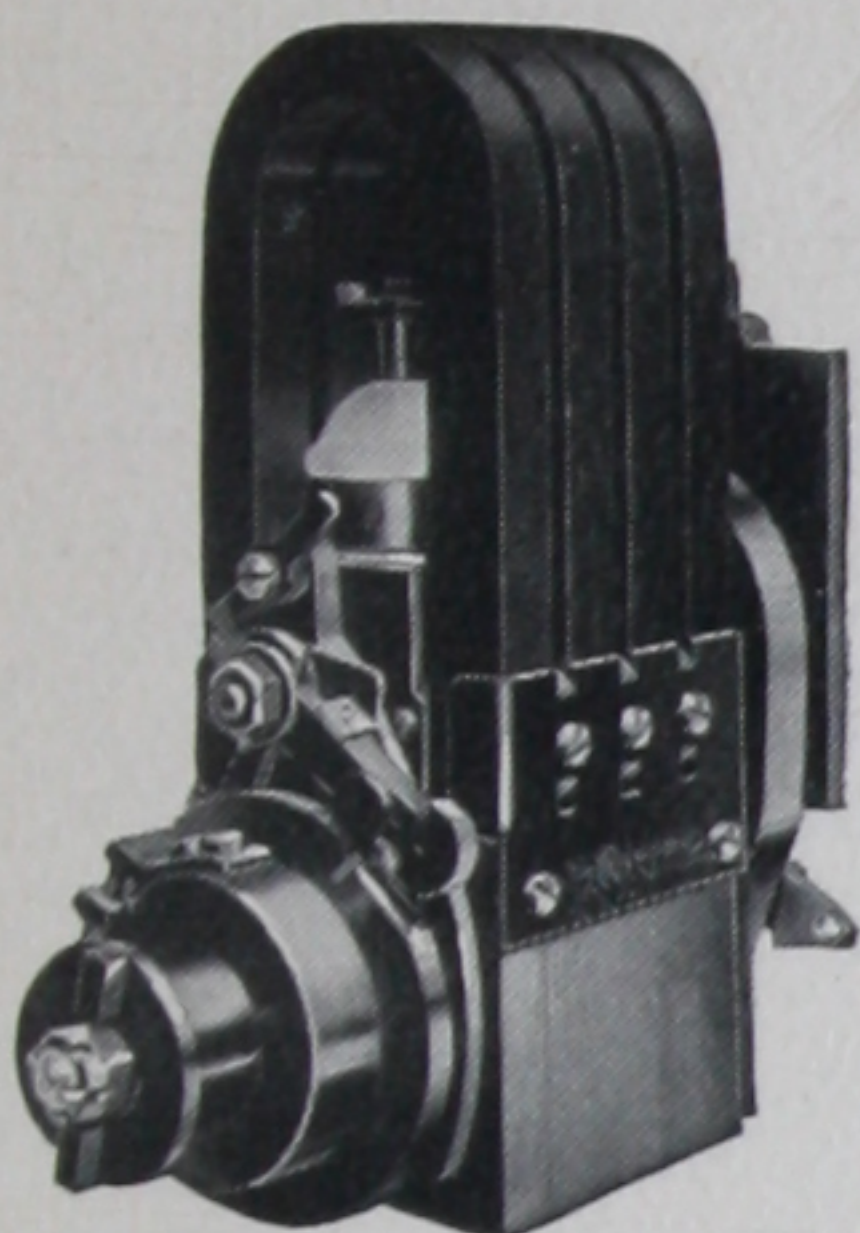
Prices on wire, cables, etc., furnished on application





# High Tension Magneto

Write for Special Booklet on either type here



**MODEL HK**

This is the most powerful Magneto made, and is intended for large, slow moving engines.

Furnished coupling or gear drive.

**MODEL H—4 Magnet**

2, 3, 4-cylinder.....	\$75.00
6-cylinder.....	85.00
8-cylinder.....	95.00

For Impulse Starter, then termed

**Model HK**, add.....\$10.00

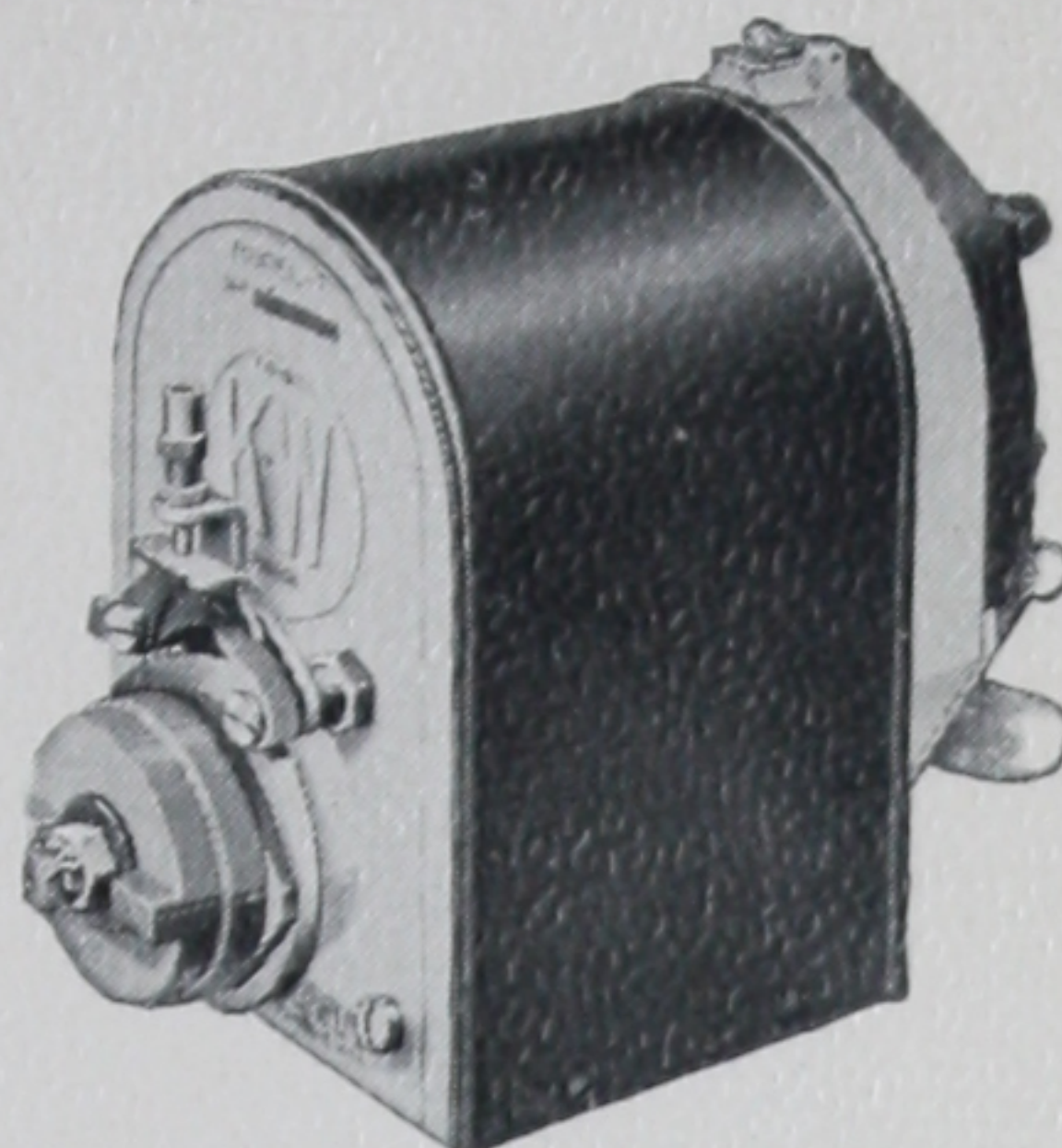
**MODEL HT—5 Magnet**

For heavy duty engines having a speed of less than 300 r. p. m.

2, 3, 4-cylinder.....	\$85.00
6-cylinder.....	95.00

For Impulse Starter, then termed

**Model HTK**, add.....\$10.00



**MODEL T**

Without Impulse Starter

1-Cylinder..	\$40.00	4-Cylinder..	\$50.00
2-Cylinder..	50.00	6-Cylinder..	52.50
3-Cylinder..	50.00		

**MODEL TK**

With Impulse Starter

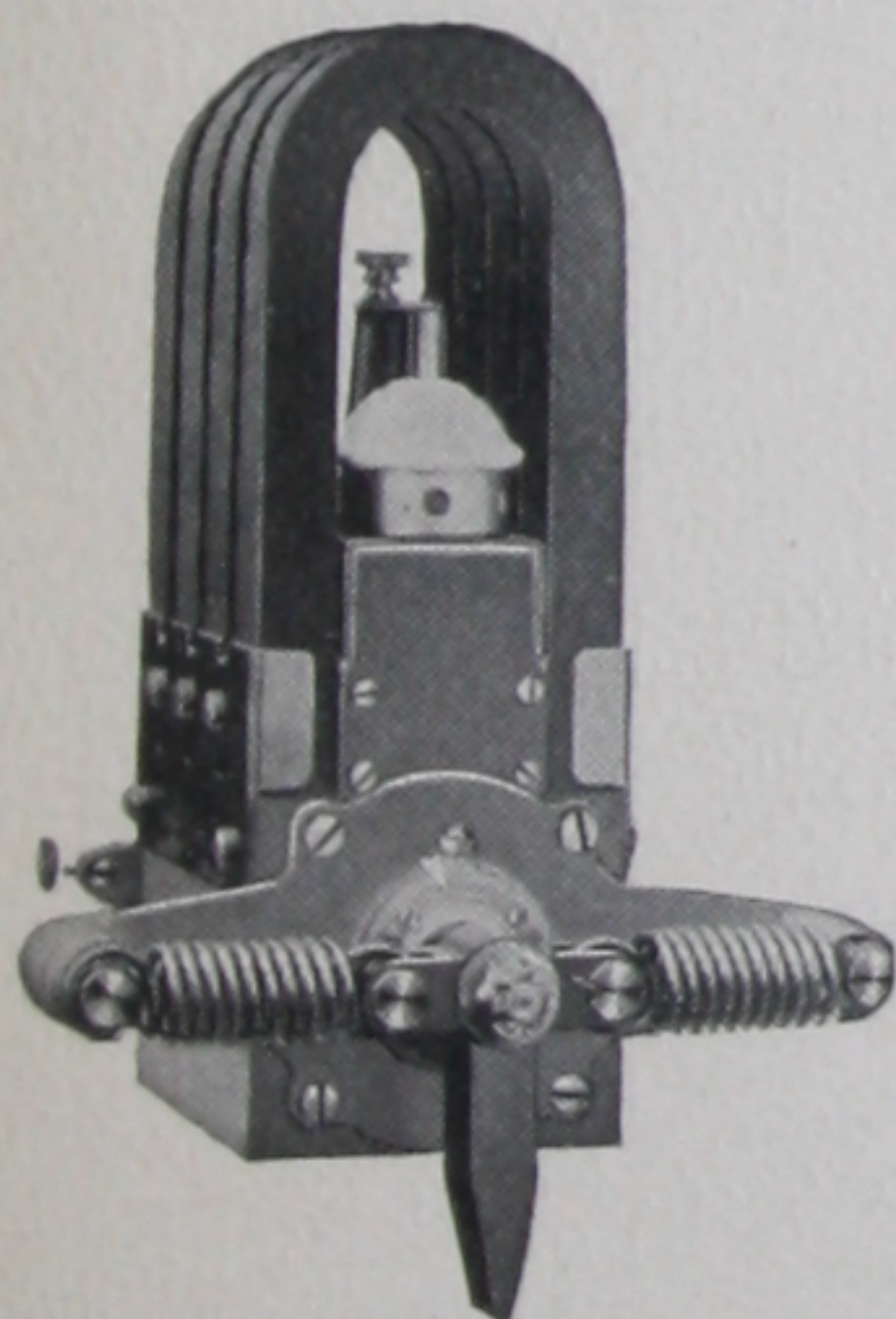
1-Cylinder..	\$45.00	4-Cylinder..	\$55.00
2-Cylinder..	55.00	6-Cylinder..	57.50
3-Cylinder..	55.00		

The Impulse Starter Attachment, illustrated on end of driving shaft above, allows the motor to be started regardless of cranking speed, as the rotor is held stationary while the coupling is moving 80 degrees, then is tripped and thrown ahead at the rate of 500 r.p.m., assuring a very hot spark for starting.

Inductor type of construction, same as our Model H and HT, assuring an exceedingly hot spark at as low a speed as the engine can be run.

Enclosed as protection against dirt, water and oil.

## FOR LARGE SINGLE CYLINDER ENGINES

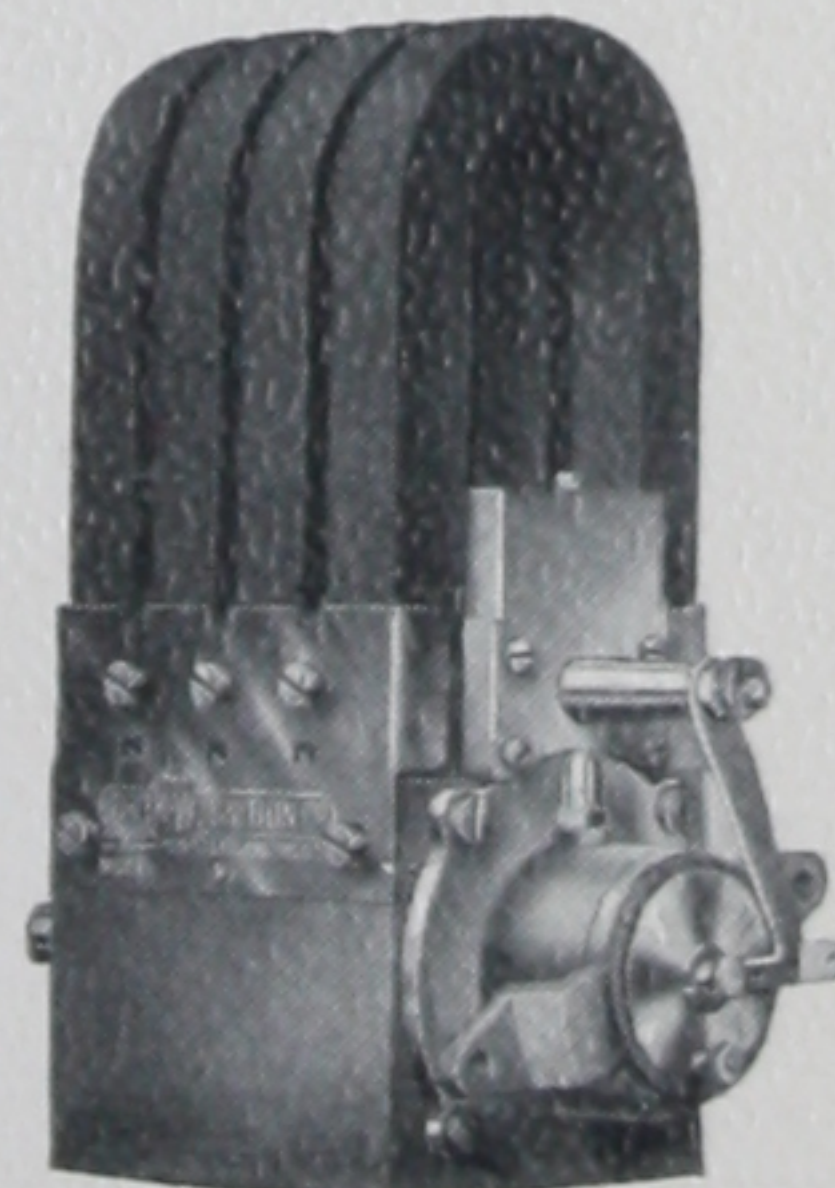


**MODEL O F MAGNETO**

**Model O**—Same as Model H, except single cylinder.....\$50.00

**Model OK**—Same as Model HK, except single cylinder..... 60.00

**Model O F**—Same as Model O, with an oscillator trip, for one-cylinder engines. Operates in either direction with trip arm up or down. Price.....\$60.00



**MODEL O MAGNETO**







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CCA